Standardisation and structuring of nursing handover in paediatric inpatient care: A quasi-experimental study

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ABSTRACT

Purpose: To evaluate the effectiveness of a structured handover tool implemented in paediatric inpatient care. Poor communication during clinical handovers can compromise patient safety. The Situation, Background, Assessment, Recommendation tool adapted for Paediatric Inpatient Care (SBAR-HP) was designed to standardise and improve this process by addressing common barriers such as omission of critical information and lack of structure.
Methods: A pre–post quasi-experimental study was conducted at Vall d'Hebron Barcelona Hospital Campus using the Handoff CEX Scale to assess quality, adherence, and satisfaction before and after implementing the SBAR-HP. Descriptive analyses and the Wilcoxon test were used to evaluate pre–post changes, alongside a logistic regression model.
Results: A total of 110 nurses participated before the implementation and 81 afterwards. Of the total participants, 92.7 % were women, with a mean age of 31.1 years (SD = 9.1). Handover quality improved significantly following the introduction of SBAR-HP: the setting dimension rose from 3.8 to 5.3 ($p < 0.00001$), organisation from 5.9 to 6.7 ($p = 0.00354$), and overall quality from 51.5 to 69 ($p < 0.00001$). A total of 70.3 % rated their adherence as ≥7/9, and 71.6 % positively assessed its applicability. A positive correlation was observed between self-assessed performance and handover quality, supporting the tool's effectiveness in structuring the process.
Conclusion: The SBAR-HP is an effective tool for structuring nursing handovers, fostering clear and safe communication in paediatric settings. Its adoption may enhance both patient safety and staff satisfaction.
Implications for practice: Implementing the SBAR-HP tool in paediatric settings may enhance handover quality, promote safer communication among nurses, and foster a culture of structured clinical exchange.

Introduction

Patient handover or patient handoff refers to the process of exchanging clinical information between healthcare professionals during shift changes, hospital discharge, or patient transfers. This procedure involves the transfer of both clinical and legal responsibility, and its proper execution is essential to ensuring patient safety and high-quality care (Arsoniadis et al., 2022; Ferrara et al., 2017).

Communication errors are among the main issues associated with nursing handovers. The omission of relevant information, lack of communication skills, inaccuracy, and the absence of a structured method are some of the key barriers identified in the literature (Bukoh & Siah, 2020; Universidad Miguel Hernández & Ministry of Health and Consumer Affairs, 2006; World Health Organization & WHO Patient Safety, 2009). In addition, factors such as time constraints, the complexity of paediatric patients, and the environment in which the handover takes place also negatively affect the quality of the process (Rocco & Garrido, 2017; Universidad Miguel Hernández & Ministry of Health and Consumer Affairs, 2006; Weston et al., 2022; World Health Organization, 2021).

Communicative difficulties encountered by nurses in this context include the omission of critical information, limited communicative competence, lack of clarity, and the absence of a structured framework (Ministry of Health and Social Policy, 2009; Rocco & Garrido, 2017; Universidad Miguel Hernández & Ministry of Health and Consumer Affairs, 2006). Moreover, the time required, the complexity of the paediatric population, and the physical setting are also factors that influence

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the quality of handovers (Bressan et al., 2019; Rocco & Garrido, 2017; Universidad Miguel Hernández & Ministry of Health and Consumer Affairs, 2006; World Health Organization, 2021).

These challenges often result in misunderstandings among professionals, increasing the risk of adverse events and directly compromising patient safety (Paredes-Garza et al., 2022). In light of this, both the World Health Organisation (WHO) and The Joint Commission have emphasised the need to implement standardised systems to improve communication during patient handovers. In 2005, this was included as one of the 'Nine patient safety solutions', and the *Global Patient Safety Action Plan 2021–2030* identified care transitions as a key area for improvement (Ministry of Health and Social Policy, 2009; World Health Organization, 2021). More recently, the *Patient Safety Strategy of the Spanish National Health System 2025–2035* has reinforced the prioritisation of patient safety across all healthcare settings in Spain, highlighting structured communication as a cornerstone to prevent adverse events (Ministry of Health, 2025).

In response, various initiatives have proposed the standardisation and structuring of nursing handovers. For example, Yánez et al. highlight the importance of systematising the process, while Ferrara et al. recommend the use of specific tools to guide and structure information exchange (Ferrara et al., 2017; Yáñez-Corral & Zárate-Grajales, 2016). These strategies include methodologies such as SBAR ('Situation, Background, Assessment, Recommendation'), I-PASS, and Flex 11, all of which have proven effective in improving communication (Buck Sainz-Rozas, 2023; Lazzara et al., 2016; Müller et al., 2018; O'toole et al., 2019).

Furthermore, studies such as that by Ferrara et al. conclude that developing communication skills among healthcare staff reduces the risk of errors and adverse events (Ferrara et al., 2017). Bressan et al. underline the role of technological tools and standardised reports in ensuring effective communication (Bressan et al., 2020). However, Müller et al. argue that in order to maximise the effectiveness of these strategies, professionals must share a common mental model—an aim that requires adequate prior training (Müller et al., 2018).

Finally, specific instruments have been developed to assess handover quality, such as the Handover Evaluation Scale (designed for neonatal settings) and the Handoff CEX Scale, which evaluates factors such as communication quality, time spent, and the perceptions of those involved (Buck Sainz-Rozas, 2023; Ferrara et al., 2017; Yáñez-Corral & Zárate-Grajales, 2016). These tools represent a significant step forward in the assessment and improvement of nursing handovers, ultimately contributing to enhanced patient safety.

In the paediatric inpatient wards of *Vall d'Hebron Barcelona Hospital Campus*, the authors identified several barriers that may hinder effective clinical handover. Chief among them is the absence of a suitable environment for conducting nursing handovers, which is often characterised by background noise, frequent interruptions and distractions that impair concentration, as well as limited proximity to essential resources such as patient information. Furthermore, there is no dedicated time allocated to the handover process within the work schedule, as nursing shifts do not overlap to allow for the structured transfer of information. This is compounded by the lack of a standardised method to guide and structure the clinical exchange between professionals.

Although SBAR has been widely studied across diverse healthcare settings, most published evidence comes from Anglo-Saxon contexts, with limited exploration of its cultural and linguistic adaptation in non-English speaking countries. Recent studies in Spain have demonstrated the potential of SBAR and ISBAR to improve communication, teamwork, and patient safety in internal medicine and surgical units. However, to our knowledge, no prior research has evaluated a formally adapted SBAR tool in Spanish paediatric inpatient care, a setting where handovers are particularly vulnerable due to frequent shift rotations, high patient turnover, and the complexity of multidisciplinary care (Gadea-Company et al., 2023; Martínez-Fernández et al., 2022). By addressing this gap, our study contributes to the international literature by providing evidence on the feasibility and impact of a culturally and linguistically tailored SBAR version, aligned with global patient safety frameworks such as the WHO's International Patient Safety Goals and the Joint Commission's National Patient Safety Goals. This approach highlights the broader relevance of structured communication tools not only for improving quality and safety locally but also for advancing global standards in paediatric nursing practice.

These limitations compromise the quality of handovers, increasing the risk of errors that endanger patient safety and continuity of care (Bukoh & Siah, 2020; Hou et al., 2019). Against this background, the present study aimed to evaluate the effectiveness of a structured information transfer tool in the paediatric inpatient wards of *Vall d'Hebron Barcelona Hospital Campus*.

Methods

Design and participants

A single-group, pre–post quasi-experimental design was conducted at *Vall d'Hebron Barcelona Hospital Campus* between September and November 2023, to evaluate the quality and structuring of nursing handovers through the implementation of the SBAR-HP tool. The study followed the recommendations of the *Transparent Reporting of Evaluations with Nonrandomised Designs* (TREND) statement guidelines (Des Jarlais et al., 2004).

The study population consisted of 102 nurses from the paediatric inpatient units who regularly participated in handovers. Nurses who had not received training related to the project, were not involved in direct patient care, or were employed under training contracts were excluded.

Sample size

The sample size was calculated using the paired means formula in the GRANMO calculator (Marrugat de la Iglesia et al., 1998). A 95 % confidence level, 80 % statistical power, and a large effect size (Cohen's $d = 1.35$) were assumed, based on previous studies evaluating handover quality in hospital settings. The standard deviation of the differences (SD$\Delta = 1.79$) was also considered (Zhou et al., 2022). The minimum sample required was estimated at 87 participants, factoring in an anticipated 30 % attrition rate. A non-random probabilistic sampling approach was applied, stratified by unit and shift, ensuring proportional representation of each stratum: General Paediatrics – day $N = 14$ (16 %) and night N = 14 (16 %); Oncology – day $N = 15$ (17.2 %) and night N = 15 (17.2 %); Paediatric Surgery – day $N = 8$ (9.2 %) and night $N = 7$ (8 %); Nephrology, Cardiology, Hepatology, and Solid Organ Transplant – day N = 7 (8 %) and night N = 7 (8 %).

Variables

Dependent variables included handover quality, defined by the domains assessed by the Handoff CEX Scale, as well as applicability, adherence, self-assessed performance, and satisfaction with the SBAR-HP tool and the evaluation instrument. Difficulties identifying a single primary outcome variable led to the adoption of a composite outcome based on scale items, which may limit the conclusion precision. Sociodemographic variables such as unit and shift were also collected, along with assignment to the pre- or post-intervention phase.

As there was no validated Spanish version of the Handoff CEX Scale, a translation and adaptation process was undertaken. Two nurses with a high level of English carried out the initial translation into Spanish. This was followed by back-translation into English by a third nurse unfamiliar with the instrument. Finally, a panel of expert nurses reviewed the Spanish version to assess content and clarity, making minor adjustments prior to implementation (see Appendix A). In addition, the authors of the original SBAR tool (Horwitz et al., 2013) were contacted to request authorization for its adaptation within the context of this

study, following recommended ethical standards for the use of validated instruments.

Intervention

The intervention involved the implementation of the SBAR-HP tool, specifically designed for this project due to the lack of validated Spanish-language tools for paediatric settings (see Fig. 1). Based on the widely recognised SBAR methodology, known for its effectiveness in standardising and structuring information transfer, the tool was introduced as a template to guide and document nursing handovers (Müller et al., 2018).

Implementation was carried out in three phases

(1) Pre-intervention: Meetings were held with nurse managers and clinical staff to present the project, explain the tool, and distribute supporting materials (instructions, examples, and printed copies of SBAR-HP). Pre-intervention questionnaires and informed consent forms were also collected.

(2) Intervention: Training consisted of a single 45-min face-to-face session combining an explanatory lecture and practical case examples. To reinforce learning and promote consistent use of the tool, educational posters summarising the SBAR-HP template and key handover recommendations were displayed in the paediatric wards (*Appendix A*). Fidelity to the intervention was monitored through attendance records collected during the training sessions, ensuring participation of all identified nursing staff. Unit managers verified attendance and facilitated the inclusion of professionals assigned to each shift. During the 15-day implementation period, regular email reminders were sent to reinforce adherence and address any questions regarding the use of the SBAR-HP tool. Participants used SBAR-HP in their routine clinical practice with ongoing support from the research team through reminders and assistance with queries. Fidelity to the tool was monitored

indirectly through self-reports and informal observation; however, no systematic audits were conducted, which is acknowledged as a study limitation.

(3) Post-intervention: Handover quality was re-evaluated using the Handoff CEX Scale, and feedback on the tool was collected.

As part of the study design, a pilot test was conducted to refine the sample size calculation and assess the feasibility of the SBAR-HP tool and the adaptation of the Handoff CEX Scale.

Data analysis

Data collection and transcription were carried out using REDCap software (REDCap Consortium, 2025) while statistical analysis was performed using R software, version 4.3.1. Descriptive analyses of the variables were conducted for all variables. Pre–post intervention comparisons were performed using the non-parametric Wilcoxon signed-rank test. Effect sizes (r) were calculated as $Z/\sqrt{N}$ to complement *p*-values and facilitate interpretation of clinical significance. Analyses were conducted with available paired cases only; participants without post-intervention data were excluded from the comparisons. The internal reliability of the Handoff CEX items was assessed using Cronbach's alpha for both pre- and post-intervention data. The relationship between overall self-assessment and total handover quality was examined using Spearman's correlation coefficient and a simple linear regression model. Additionally, Mann–Whitney tests were performed to compare baseline scores between participants with and without post-intervention data, and Kruskal–Wallis tests were used to explore differences in change scores across hospital units and work shifts.

Ethical considerations

The study was approved by the Clinical Research Ethics Committee (CEIm) of Vall d'Hebron Research Institute (VHIR). All participants received an information sheet, provided written informed consent, and

Fig. 1. *The SBAR-HP (SBAR - Hospitalización Pediátrica) tool.* Source: Adapted from the original SBAR tool (Müller et al., 2018).

participated on a voluntary basis. Data were coded to ensure confidentiality, in accordance with the bioethical principles of the Declaration of Helsinki (The World Medical Association, 2023). All personal data were processed in compliance with the legal framework established by Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation, GDPR) (European Parliament and Council of the European Union, 2016).

Results

A total of 110 nurses participated in the pre-intervention phase, and 81 completed the post-intervention assessment, corresponding to an attrition rate of 26.36 % (Fig. 2). The participant flow is summarised in the diagram below, adapted from the CONSORT model for quasi-experimental studies. Baseline pre-intervention scores were compared between participants who completed both assessments and those who did not complete the post-intervention phase. No statistically significant differences were observed in any item or in the total score ($p > 0.05$, Mann–Whitney test).

The distribution by shift, unit, and age was representative, in accordance with the defined sampling strategy. Of the participants, 92.7 % ($N = 102$) were women, with a mean age of 31.1 years (SD = 9.1).

Nurses from eight different work shifts were represented in the sample: 7-h morning shifts, 6.4 % ($n = 7$); 7-h afternoon shifts, 5.5 % ($n = 6$); 12-h day shifts on Mondays, 22.7 % ($n = 25$); 12-h day shifts on Tuesdays, 22.7 % ($n = 25$); 12-h night shifts on Mondays, 13.6 % ($n = 15$); 12-h night shifts on Tuesdays, 13.6 % ($n = 15$); 10-h night shifts on Mondays, 6.4 % ($n = 8$); and 10-h night shifts on Tuesdays, 7.3 % ($n = 8$).

Regarding unit distribution, 18 nurses (16.4 %) were from the Nephrology, Cardiology, Hepatology, and Solid Organ Transplant units; 40 from General Paediatrics (36.3 %); 27 from Paediatric Oncohaematology (24.5 %); and 20 from Paediatric Surgery (18.2 %). All nurses signed the informed consent form and the data processing information sheet.

The variation in the total handover quality score was analysed according to hospital unit and work shift. No statistically significant differences were found between units or shifts (p > 0.05, Kruskal–Wallis test).

The results for each item on the scale, along with the corresponding significance levels, are presented in Table 1.

Effect sizes (r) for the Wilcoxon signed-rank tests ranged from small to large, providing additional information on the magnitude of differences. Significant improvements with moderate to large effect sizes were observed in setting ($r = 0.78$, $p < 0.001$), organisation ($r = 0.54$, $p = 0.004$), content ($r = 0.44$, $p = 0.011$), humanistic qualities ($r = 0.36$, $p = 0.028$), overall self-assessment ($r = 0.55$, $p = 0.001$), and overall handover quality ($r = 0.84$, $p < 0.001$). No significant changes
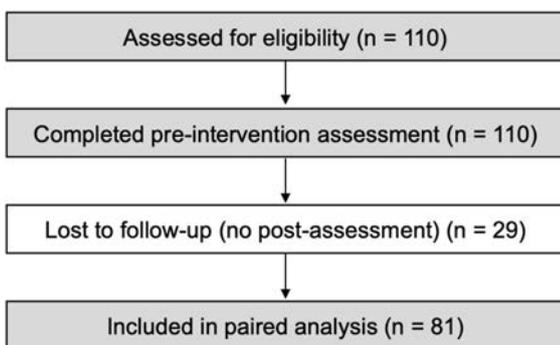
Table 1
Results of the Patient Handoff CEX Scale for the total sample (scale from 1 to 9) and significant differences between pre- and post-intervention assessments using Wilcoxon signed-rank test.
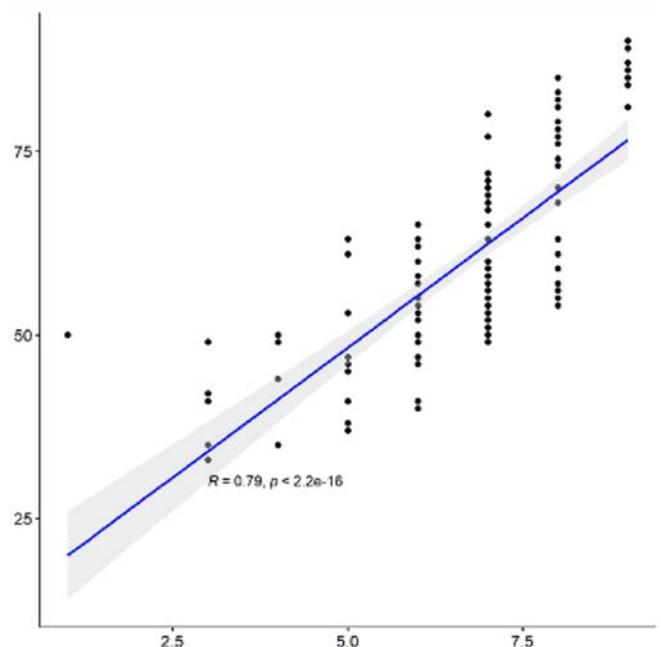
	PRE SBAR-HP		POST SBAR-HP		p-value
	Median	(IQR)	Median	(IQR)	
Setting	4	(3, 5)	6	(4, 7)	<0.001
Organisation	6	(5, 7)	7	(6, 8)	0.004
Communication skills	7	(6, 8)	7	(7, 8)	0.089
Content	7	(6, 8)	8	(6, 8.5)	0.011
Clinical judgement	8	(7, 8)	8	(7, 8)	0.866
Humanistic qualities	7	(6, 8)	8	(7, 8)	0.028
Self-assessment	7	(6, 7)	7	(6, 8)	0.001
CEX overall assessment	7	(6, 8)	7	(5, 8)	0.144
Overall handover quality	53	(47, 56)	70	(60.5, 78)	<0.001

were found for communication skills, clinical judgement, or the CEX overall assessment.

The internal reliability of the Handoff CEX scale was satisfactory in both assessments. Cronbach's alpha was 0.86 in the pre-intervention and 0.89 in the post-intervention phase, indicating high internal consistency and coherence among the items used to assess handover quality. These findings support the use of the total score as a composite measure of overall handover performance.

Additionally, a positive correlation was observed between self-assessment (overall evaluation) and the total handover quality score, calculated as the sum of the scale items ($\rho = 0.711$, 95 % CI 0.69–0.86, $p < 0.001$). A simple linear regression model was also computed separately, yielding a significant association between both variables ($R^2 = 0.178$, $\beta = 0.40$, 95 % CI 0.21–0.60, $p < 0.001$) (Graph 1).

Regarding adherence, 70.3 % of participants rated their adherence to the tool over the previous 15 days with a score of 7 out of 9 or higher, and of these, 44.4 % gave it the maximum score. The median adherence score was 8. With respect to the tool's applicability, participants expressed a positive view of its future use. A total of 71.6 % of participants rated this item with a score of 6 or higher. The median applicability score was 6 out of a maximum of 9. The most frequently selected scores were 6 ($n = 21$) and 9 ($n = 20$).

Fig. 2. Participant flow diagram adapted from CONSORT for a quasi-experimental pre–post design.

Graph 1. Correlation between overall self-assessment (X) and handover quality (total scale score, Y).

Finally, a post hoc power analysis indicated that the achieved sample ($n = 81$ paired observations) provided >90 % power ($\alpha = 0.05$, two-tailed) to detect moderate within-subject effects ($r \geq 0.4$) using the Wilcoxon signed-rank test, supporting the adequacy of the sample size for detecting meaningful differences.

Discussion

Standardised communication in paediatric nursing practice

Handover is a key element in ensuring patient safety, quality of care, and nurses' satisfaction with their clinical practice (Paredes-Garza et al., 2022; Weston et al., 2022). However, this process faces significant challenges in hospital settings, particularly in paediatric inpatient services, where the complexity of patients requires clear, accurate and structured communication (Lazzara et al., 2016; McQuillan et al., 2014; Zhou et al., 2022). International organisations such as the WHO and the Joint Commission have emphasised structured information exchange as a priority for improving safety, yet evidence on its adaptation and application in Spanish paediatric care remains scarce (World Health Organization & WHO Patient Safety, 2009). This study contributes to bridging that gap by testing an adapted SBAR protocol within this specific setting.

Effects of SBAR-HP on handover quality

The implementation of the SBAR-HP protocol showed a positive impact on handover quality, particularly in the domains of structured communication, identification of critical patients, and clarity of clinical recommendations. Statistically significant improvements with moderate-to-large effect sizes were observed in several domains of the Handoff CEX Scale, confirming that the instrument was sensitive to relevant changes. Importantly, overall self-assessment also improved, and its strong correlation with the total handover quality score was confirmed through both Spearman's correlation and linear regression, indicating that staff perceptions aligned consistently with objective improvements in handover quality. While these findings reinforce the potential of SBAR-HP, conclusions regarding its effectiveness must be tempered due to the short follow-up and methodological constraints.

Alignment with previous evidence

These results are consistent with previous studies demonstrating the effectiveness of interventions to improve information transfer. McQuillan et al. (McQuillan et al., 2014) reported improvements in start times, handover duration, and reduced distractions following protocol implementation in a paediatric hospital, though they noted challenges in sustaining the intervention amid competing priorities. Similarly, Starmer et al. (Starmer et al., 2014) observed a reduction in medical errors and preventable adverse events following the adoption of a structured handover programme for residents. In the context of nursing, Mannix et al. (Mannix et al., 2017) showed that ISBAR improved paediatric handover practice and family involvement, while Stimpson et al. (Stimpson et al., 2020) reported that m-ISHAPED reduced reported safety events and increased nurse satisfaction. These findings collectively highlight that structured tools can strengthen communication and patient safety, particularly in high-demand paediatric environments.

With regard to paediatric handover, Fucik (Fucik, 2019) demonstrated that standardised bedside handover enhanced communication, while Solan et al. and Lazzara et al. (Lazzara et al., 2016; Solan et al., 2014) underlined the benefits of multidisciplinary approaches in reducing fragmentation and improving continuity of care. Our findings align with these reports, showing that our adapted SBAR-HP appeared to facilitate efficient identification of critically ill patients and reduced the omission of essential information.

The Handoff CEX Scale was instrumental in evaluating handover quality in this study. Previous work by Ferrara et al. (Ferrara et al., 2017) validated its use for assessing nursing handovers, highlighting its value in identifying areas for improvement. In our study, the scale proved sensitive to detecting significant changes in communication and organisational domains, thereby supporting its applicability in clinical practice. From a broader perspective, improvements in handover quality have important implications for patient safety, as communication failures are strongly associated with adverse events (Bressan et al., 2019; Bukoh & Siah, 2020).

Strengths and limitations

The strengths of this study include the pre–post design, adequate sample size, high adherence among participants, and positive staff feedback on the protocol, all of which support the feasibility and acceptability of SBAR-HP. These strengths, together with ethical approval and rigorous statistical analysis, add robustness to the findings and may encourage adaptation in other paediatric contexts. However, long-term sustainability depends on addressing organisational factors such as workload, staff turnover, and managerial support, which can hinder consistent use of structured protocols.

Beyond the immediate improvements observed, the findings have broader implications for scaling interventions across health systems. Structured handover protocols are aligned with global patient safety strategies, and our study provides evidence that they can be adapted successfully to Spanish paediatric inpatient care. Future research should validate SBAR-HP in diverse clinical contexts and explore its impact on patient-level outcomes, such as adverse event reduction and quality indicators. Addressing system-level facilitators and barriers will be key to ensuring sustainability and embedding structured handovers as a routine element of safe paediatric nursing practice.

First, one of the main limitations is the absence of a validated Spanish version of the Handoff CEX Scale. Although a forward–backward translation process was undertaken and reviewed by a panel of experts to ensure content adequacy, the lack of formal psychometric validation represents a significant methodological constraint.

Second, the single-group, pre–post quasi-experimental design enabled each participant to serve as their own control and was implemented with an adequate sample size and full ethical approval. However, the absence of a parallel control group limits causal inference and precludes attributing the observed improvements solely to the intervention. Future controlled studies are therefore needed to confirm these findings and strengthen internal validity.

Third, the short 15 days follow-up period prevents conclusions regarding the long-term sustainability of the intervention. This duration was constrained by organisational factors such as high staff rotation between paediatric units, short-term contracts with frequent reassignments, and 12-h shifts with compensatory rest days, all of which limited consistent participation. National holidays and peak workload periods were deliberately avoided to maximise response rates and data completeness. Participant attrition between the pre- and post-intervention assessments (110 to 81) was expected under these conditions. The comparison of baseline scores between completers and non-completers, however, showed no statistically significant differences, suggesting that attrition did not substantially affect the comparability of the groups. A paired data analysis including only complete pre–post responses was therefore considered appropriate. Nonetheless, potential selection, attrition, and performance biases cannot be fully excluded. The observed improvements may have been partially influenced by Hawthorne effects, increased motivation, or social desirability, rather than reflecting the exclusive effectiveness of the SBAR-HP intervention. Future studies should adopt longitudinal designs

with more stable staffing and consider incorporating control or cross-over groups to minimise these sources of bias and better assess the long-term sustainability and true causal impact of structured handover tools.

Fourth, the single-centre design and reliance on voluntary participation limit the generalisability of the findings to other contexts. Finally, the demanding workload during the study period may have affected participation and adherence, highlighting the need for strategies to mitigate this impact in future research. Despite these limitations, the rigorous pre–post design, adequate sample size, and ethical oversight strengthen the reliability of the results, and replication in other centres and contexts is warranted.

Future research directions

Future studies should focus on validating the SBAR-HP protocol across multiple healthcare settings and professional profiles to confirm its psychometric soundness and contextual adaptability. In addition to assessing long-term effects on clinical outcomes such as adverse event reduction, research should explore the organisational and behavioural mechanisms that influence sustained use of structured handovers. Implementation science approaches, including mixed-method and longitudinal designs, could help identify facilitators and barriers to integration into routine practice. Collaboration across institutions and alignment with international patient safety frameworks will be essential to consolidate SBAR-HP as a reliable and scalable strategy for improving paediatric nursing communication.

Implications to practice

Implementing strategies to improve nurse-to-nurse communication in paediatric units should be a priority for all healthcare institutions. Nurses, due to their direct involvement and strategic position within care processes, should play a key role in leading and developing such initiatives aimed at enhancing handover quality.

The integration of SBAR-HP into daily nursing practice offers significant potential to optimise handover quality and reduce the risks associated with communication errors. This tool not only contributes to strengthening patient safety but also encourages professional adherence to a culture of continuous improvement.

The structuring and clarification of information exchange resulting from its use may positively impact patient and family satisfaction by ensuring safer and more consistent care. Nevertheless, its applicability may vary depending on the context in which it is implemented, necessitating a careful assessment and adaptation to the specific needs and characteristics of each setting. Future research should address these contextual variations, identify potential barriers to adoption, and develop effective strategies to overcome them, thereby ensuring sustainable implementation and maximising long-term benefits.

Conclusions

The findings of this study support the reliability of the Handoff CEX Scale as a tool for evaluating handover quality in paediatric inpatient care. Despite the limitations identified, the implementation of SBAR-HP led to significant improvements in key aspects of the handover process, including organisation, setting, communication skills, content, and humanistic qualities.

The analysis of adherence results confirms that the tool was used consistently by participants, while the satisfaction data reflect a positive evaluation by nurses. Taken together, these findings highlight the potential of SBAR-HP to standardise and structure this critical process, promoting safer and more effective communication in paediatric settings.

CRediT authorship contribution statement

Pablo Buck Sainz-Rozas: Writing – review & editing, Writing – original draft, Visualization, Supervision, Methodology, Investigation, Funding acquisition, Data curation, Conceptualization. **García Fernández:** Writing – original draft, Validation, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Marina Domínguez:** Writing – review & editing, Visualization, Software, Resources, Investigation, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.pedn.2025.11.028.

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