

## REVIEW ARTICLE OPEN ACCESS

# Educational Interventions to Improve Knowledge Among Nurses in the Prevention of Skin Tears in Hospitalised Adults and Older Adults: A Scoping Review

Heidi Hevia Campos<sup>1</sup>  | Cinthia Viana Bandeira da Silva<sup>1</sup>  | Juliana Takahashi<sup>2</sup>  |  
Marilia Mastrocolla de Almeida Cardoso<sup>3</sup>  | Lily Ríos Mazzachiodi<sup>4</sup>  | Kevin Woo<sup>5</sup>  |  
Vera Lucia Conceição de Gouveia Santos<sup>6</sup> 

<sup>1</sup>Adult Health Program, The Sao Paulo University School of Nursing, Sao Paulo, Brazil | <sup>2</sup>The Brazilian Centre for the Evidence-Based Healthcare, Sao Paulo, Brazil | <sup>3</sup>Hospital das Clinicas of Medical School of Sao Paulo State University, Sao Paulo, Brazil | <sup>4</sup>Andres Bello University, Viña del Mar, Chile | <sup>5</sup>Queen's University, Kingston, Ontario, Canada | <sup>6</sup>The School of Nursing, University of São Paulo, Sao Paulo, Brazil

**Correspondence:** Heidi Hevia Campos ([hmheviac@gmail.com](mailto:hmheviac@gmail.com))

**Received:** 22 December 2024 | **Revised:** 31 January 2025 | **Accepted:** 3 February 2025

**Keywords:** adults | aged | continuing nursing education | prevention | skin tear | soft tissue injuries

## ABSTRACT

To map and synthesise the current literature on educational interventions provided by nurses to nursing professionals to prevent skin tears in adults and older adults. A scoping review based on JBI methodology. Medline, SCOPUS, CINAHL, Web of Science, Science Direct, LILACS, Cochrane Library, ERIC, EMBASE, BVS and J\_STAGE were searched from June to November 2022. Grey literature and unpublished studies were included. Studies in English, Spanish or Portuguese were considered, with no year limits. Searches were managed in Endnote and Rayyan. Two independent reviewers screened titles, abstracts and full texts using Population, Concept and Context criteria. Discrepancies were resolved by a third reviewer. Data extraction employed a structured spreadsheet. Of 694 articles retrieved, four met the inclusion criteria, primarily prospective quasi-experimental studies. Two educational modalities were noted: face-to-face classes utilising PowerPoint presentations and online training accessible 24/7 via institutional websites. Key outcomes included improved knowledge levels and reduced skin tear incidence. Nurse-led educational interventions may enhance nursing knowledge and decrease skin tear incidence. Further research is necessary to identify optimal educational approaches and technologies, assess their feasibility and evaluate their direct impact on clinical practice and skin tear prevention and incidence.

## 1 | Introduction

Skin tears (ST) are prevalent and acute wounds that constitute a significant health problem both for patients, due to pain and potential infection, and for the health system costs [1, 2]. The International Skin Tear Advisory Panel (ISTAP) defines ST as 'traumatic wounds caused by mechanical forces, including removal of adhesives. Severity may vary by depth (not extending through the subcutaneous layer)' [2, 3]. ST are reported across all healthcare settings and are predominantly found in the elderly, neonates and critically ill populations [1, 2, 4–10]. Age-related

structural characteristics of the skin and its ability to perform normal functions make this population more susceptible to ST [3, 5, 8, 11–17]. ST can occur on any location of the body, particularly on the extremities [1, 2, 18, 19]. ST prevalence varies across countries, healthcare settings and patient populations [1, 2].

Studies report ST prevalence between 3.3% and 19.8% in acute care; 14.3% in palliative care; 5.5%–19.5% in the community; and 3%–26% in long-term care [2, 6, 7]. ST incidence varies between 2.2% and 92%, with the highest rate in long-term care facilities [1–3, 20]. The variety in rates may be attributed to different

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2025 The Author(s). *International Wound Journal* published by Medicalhelplines.com Inc and John Wiley & Sons Ltd.

### Summary

- Due to the aging of the population we will have more and more people with vulnerable skin and susceptible to developing skin tears.
- Education for health professionals is recognized for its impact on the prevention and treatment of injuries.
- Face to face education and online training are feasible and well-accepted strategies to improve nurses knowledge and outcomes on skin tears prevention.

populations, differences in prevention and management practices, equipment and lack of knowledge leading to inconsistent approaches for assessment and documentation [1–3, 21].

Despite the high prevalence of these lesions and the considerable impact, STs are highly preventable, although they are often under-recognised and under-estimated, resulting in delayed or inappropriate prevention and management [1, 7, 21], besides complications [1, 3].

To raise awareness and improve the quality of care, there is a need for nurses to acquire in-depth and up-to-date knowledge [1, 22] for ST assessment, evaluation, classification and documentation. While the evidence is tenuous, it is commonly accepted that improved education is essential to influence evidence-informed practice for ST issues [6, 7, 9, 22, 23]. Little is known about the existing ST effective knowledge dissemination strategies among nurses.

The objective of this scoping review was to map out and synthesise the current state of the literature on educational intervention programmes provided by nurses to nursing professionals (registered nurse [RN], licensed practical nurse [LPN], nursing assistants [NA] or nurses' aides [AIDES], Registered practical nurses [RPNs]), to improve knowledge in the prevention of ST in older adults across various health care settings.

## 2 | Methods

This review followed the Joanna Briggs Institute (JBI) methodology for scoping review [24, 25] using the checklist Preferred Reporting Items for Systematic Review and Meta-analyses for Scoping Review (PRISMA-ScR) [26]. A standardised, rigorous approach was employed to ensure an exhaustive search and mapping of all available literature to identify common themes and gaps [24, 25]. The protocol of this scoping review is registered in the Open Science Framework—OSF (DOI: <https://doi.org/10.17605/OSF.IO/CDQHR>).

The review questions were developed following the Population/Concept/Context framework (PCC) [27] (Table 1): What are the educational interventions provided by nurses to nursing professionals to prevent ST in older persons? And: What are the characteristics of educational interventions: the technique and educational format, the type of learners, the length of the intervention and outcome evaluation?

**TABLE 1** | PCC framework.

Population	Nurses working in different healthcare settings providing care to institutionalised adult and elderly patients.
Concept	Educational interventions or training on ST prevention for nurses provided by nurses.
Context	Locations where nurses provide care (acute care, intensive care, palliative care, community, primary care clinics, long-stay residences, oncology services, long term care among others).

Nursing educational intervention refers to formal/structured and informal support to disseminate knowledge, raise awareness, change attitudes, enhance skills and modify behaviours for nurses [28]. Some examples of these interventions are mentorship, presentations, simulation/videos and group workshops and seminars [29].

Guided by the predetermined PCC framework, we included published materials in English, Spanish and Portuguese. Only studies with an evaluation method and specified outcomes were included. Editorials, letters to the readers and abstracts of conference papers were excluded.

### 2.1 | Types of Sources

The scoping review considered qualitative, quantitative or mixed primary study designs, literature reviews (systematic and non-systematic), meta-analyses and meta-syntheses, experimental and quasi-experimental studies (randomised and non-randomised controlled trials), besides descriptive observational studies (prospective and retrospective cohort, case-control, prospective and retrospective longitudinal, cross-sectional and case series) that addressed educational interventions provided by nurses to health professionals to prevent ST.

Grey literature and other unpublished studies, including dissertations and clinical practice guidelines; theses in repositories such as CAPES Thesis (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, Brazil), Teseo (Doctoral Theses database, Spain), DART-E thesis (Europe E-thesis Portal), RCAAP (Portuguese Open Access Scientific Repositories); Google Scholar (including textbooks and conference proceedings); TROVE (Australian online library database); OATD (Open Access Theses and Dissertations); government registries; World Health Organisation; multi-professional and nursing association websites, specialised in stomatherapy or wounds; websites; blogs; Clinicaltrials.gov, were also considered.

### 2.2 | Search Strategy

The search strategy aimed to locate published or unpublished studies to answer the research questions and involved a three-step strategy [14, 24].

The first step included a preliminary but structured search of MEDLINE (Ovid) and SCOPUS (Elsevier) to identify articles related to the topic using keywords: 'friction injury' or 'skin tears' or 'laceration' and 'Nurses' and 'education'. The second step involved a search in broader databases, with the support of the health librarian, who provided guidance on search refinement to ensure the inclusion of all appropriate keywords and index terms, adapted to each of the databases and/or information sources. The third step incorporated a manual search for additional studies in the reference list of the included articles. The PubMed search strategy is detailed in (Data S1). Search descriptors and strategies were identified based on MeSH and Cumulative Index to Nursing and Allied Health Literature (CINAHL) Headings from the inception of the databases to November 2022.

### 2.3 | Sources of Information

Using the same search strategies and specific terms, the following databases were examined: CINAHL (Ebsco), Cochrane Library (John Wiley), LILACS (VHL Regional Portal), Embase (Elsevier), SCOPUS (Elsevier), Web of Science (Clarivate Analytics), MEDLINE (PubMed), J-STAGE (Japanese, Science and Technology Agency), BVS, Science Direct (Elsevier) and ERIC (US. Department of Education), as well as unpublished studies, theses in repositories such as CAPES Thesis Portal (Brazil), Teseo (Doctoral Theses database, Spain), DART-E thesis (Europe E-thesis Portal), RCAAP (Portuguese Open Access Scientific Repositories), Google Scholar (including textbooks and conference proceedings), TROVE, OATD, government registries, World Health Organisation, multi-professional and nursing association websites, specialised in stomatherapy and wound care and Clinical Trials.gov.

### 2.4 | Selection of Studies

After the search, all identified records were collated and uploaded to the EndNote bibliographic reference manager (20/2020) (Clarivate Analytics, PA, USA) and duplicates were removed. From the Endnote manager, the selected articles were exported to the Rayyan review manager [29], which allowed viewing and selecting the articles of interest by title and summary. Titles and abstracts were then screened by two independent reviewers for assessment against the inclusion criteria, and potentially relevant ones were imported into the Rayyan review manager [29]. Next, the full text of the selected citations was assessed in detail against the inclusion criteria (PCC) by two independent reviewers in the Rayyan review manager. Reasons for the exclusion of full text studies were noted. Disagreements that arose between reviewers at any stage were resolved by a third reviewer. Search results were fully reported and are presented in a flowchart of preferred reporting items for systematic reviews and meta-analyses (PRISMA) [30].

### 2.5 | Data Extraction

The extraction process, data analysis and presentation of results followed the JBI template [14, 31]. Two independent reviewers

extracted data from the included articles using a data extraction tool developed by the reviewers (Data S2), which allowed comparison of the similarities and differences of the educational interventions. The extracted data were: (i) General data: author and year, region, type of publication, objective; and (ii) Specific data: population/sample, concept (methods or strategies of educational interventions), context (where the educational interventions are carried out) and the impact of education. Only one of the authors of an included article was contacted to request additional data [32]. No critical evaluation of the included articles was performed.

After the first article extraction, the tool was adjusted for the educational interventions record.

### 2.6 | Data Analysis and Presentation

The information extracted from the included articles was analysed and summarised to delineate all identified educational interventions. The extracted data is presented according to the PCC proposal, in a table and diagram forms. The synthesis followed the guidelines of the EQUATOR checklist, Preferred Reporting Items for Synthesis review and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR) [25].

## 3 | Results

The results are presented according to the characteristics of the studies and their components (authors and sample); educational interventions, including additional resources and evaluation of interventions; and the prevention measures identified.

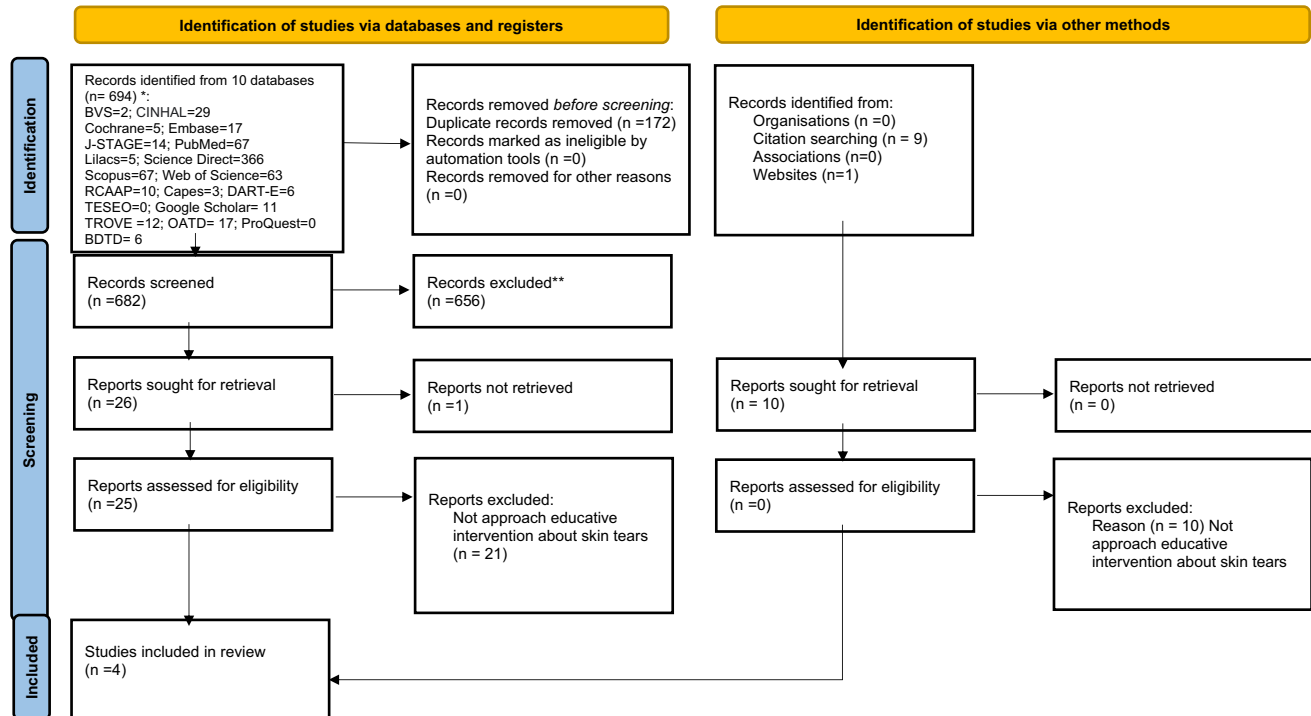
### 3.1 | Characteristics of the Studies

The search using databases yielded 694 articles; 172 were removed for duplication; 656 were excluded after reading their titles and abstracts, leaving 26 studies. We also identified 9 articles from the review of reference lists and one thesis. Thirty-five full-text articles were read, among which 31 were excluded (Data S3), leaving 4 for the scoping review analysis (Figure 1).

The four selected studies were published in English, from the United States [23], Australia [33], Japan [32] and New Zealand [9]; two of them in the last 4 years. These studies used a similar quasi-experimental and prospective design to compare knowledge before and after educational interventions. Only one study [32] compared the ST incidence before and after the intervention, and another study [33] documented the prevalence. The studies were carried out by two wound care specialists, a PhD-prepared researcher, and a university professor (Table 2).

All studies included samples of nurses; one included healthcare assistants, and two [32, 33] included patients, who were assessed for a skin condition, demographic and clinical variables [32] to estimate the ST risk, prevalence [33] and incidence [32]. Total sample sizes ranged from 37 to 416 participants. Studies were carried out in critical care, medical-surgical and specialty care units [23] residential centres for the elderly [9] care units, and

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources



**FIGURE 1** | PRISMA flowchart for the scoping review process, which included searches of databases, registers and other sources. \*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers). \*\*If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools. Source: Page et al. [30]. For more information, visit: <http://www.prisma-statement.org/>.

acute care rehabilitation in older adults [33] and long-term care facility [32].

### 3.2 | Educational Interventions

Two modalities of educational interventions were identified. One refers to the use of Information and Communication Technologies—ICTs, through the institution's website, where educational material was uploaded (Skin Tears Education Program), accessible 24 hours a day, 7 days a week, for four consecutive months; the duration of the training was 30 minutes [23]. The other three articles [9, 32, 33] applied in-person presentations delivered between 30–90 min, about ST definition, identification and evaluation, classification and differentiation, predisposing factors, preventive skin care, treatment and documentation, as well as the proper use of products, storage and conservation and prevention interventions [9, 23, 32, 33].

Participants received a copy of the presentation and supporting educational material in two studies [9, 33]. It is not clearly specified how many times the participant had the opportunity to view the educational presentation after the initial training (Table 2). All educational interventions took place in the workplace. To ensure education was inclusive and accessible for all nurses,

especially in the evening and at night, some studies introduced trained champions [9, 33].

#### 3.2.1 | Additional Educational Resources

In two studies [9, 33], additional educational resources were implemented with the objective of enhancing learning, standardising practices and guiding evidence-based care. These resources included a standardised online order list for wound care products, a pictorial guide for supplies and the evaluation of wounds and ST, descriptions of product functions, indications and application tips, as well as a glossary of terms. Furthermore, guidelines for the storage and preservation of creams and supplies were provided, alongside organisational policies for the prescription, dispensing and disposal of products [9]. Other educational tools included pocket cards with up-to-date ST classification and treatment guidelines, visual aids on wound trolleys and in clinical rooms, brief explanatory illustrations and practical advice. Specifically, Lopez [33] ensured that the algorithm for the management and prevention of skin tears, along with the ST classification, was prominently displayed in areas visible to nursing staff.

In two additional studies [34, 35], a baseline audit was conducted to identify deficiencies in care. Based on these findings, multiple strategies were implemented to address the identified gaps, including the provision of educational resources for patients and caregivers, training sessions for staff, availability of appropriate materials according to best practices, implementation of an optimized care plan for managing ST, and the creation of skin integrity kits to

**TABLE 2** | Characteristics of the articles included in the scoping review, according to the authors and year of publication, objectives, type of study, methods, population sample and educational intervention.

Author Year and Country of publication	Aims	Type of Study	Methods	Sample and setting	Intervention	Outcomes or main results
McTigue et al., 2009 USA	Identify RN knowledge about ST and the effectiveness of an online educational programme	Prospective, quasi-experimental educational intervention	–Initial measurement with knowledge test about ST (14 items)	416 RN Acute care units (critical, medical-surgical and specialties), of two community hospitals	Educational programme on the hospital intranet, available 24/7 for 4 months; 30-min duration Educational contents: ST predisposing factors, identification, prevention, treatment and documentation	(a) Improvement of nurses' knowledge about ST identification, classification, differentiation, evaluation, treatment and prevention (b) ST decreased for 13 months, from 18.8% to 8.9% after the protocol implementation
			–Post-intervention measurement, same test			
			Participants were evaluated in 3 categories of knowledge about ST			
			Pre-test			
			Post-test			
			ST identification and evaluation			
			97,1%			
			99,1%			
			94,9%			
			ST classification			
			83,4%			
			94,9%			
			93,7%			
			ST treatment			
			73,9%			
			94,9%			
			93,7%			
Author year and country of publication	Aims	Type of study	Methods	Population/sample and setting	Intervention	Results/outcomes or main results
Pagan and Harvey, 2019 New Zealand	–Determine professionals' knowledge and educational needs about ST –Report ST	Quasi-experimental, prospective	–Pre-application of knowledge questionnaire to determine educational requirements (knowledge/practice) and assess educational gaps	52 nurses and 117 healthcare assistants—HCA; convenience sampling In the workplace, (residential care centre for the elderly)	Three PowerPoint presentations (20–30 min) Educational contents: ST evaluation, prevention, and management Additional educational resources: Standardised online list of wound products, a pictorial guide for supplies and evaluation of wounds and ST, product functions, indications and application advice, glossary of terms and guide for skin care and storage and preservation of supplies	(a) Improvement of the learning of knowledge and practice of nursing care and HCA (b) ST number decrease maintained 3 months after the implementation of the educational programme ST notification was maintained for 16 months. (c) Implementation of skin care regimen (moisturising) (d) The role of champions helped lead the staff and ownership of the programme
			–Implementation of the educational programme, and inclusion of educational resources			
			–Recruitment of nursing champions			
			–Reassess the knowledge and effectiveness of the programme after implementation using the same questionnaire. They used a continuous quality improvement methodology to implement the programme, which allows for flexibility and adjustments.			

(Continues)



TABLE 2 | (Continued)

Author year and country of publication	Aims	Type of study	Methods	Population/sample and setting	Intervention	Results/outcomes or main results
Lopez et al., 2011 Australia	Guarantee ST prevention and treatment General objectives— To assess the implementation of practice guidelines for ST prevention and management (pre-and post). - To explore the ST prevalence	Pre- and post-audit (incidence) of implementation of JBI prevention and management practice guidelines (type of study not specified)	A survey was used for the pre-implementation audit of the practice guidelines for ST prevention and management. Using the JBI Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRIP) programmes. (The guideline has 8 ST criteria) ST 1-day prevalence was calculated and classified. 20 nurses were observed transferring techniques and using wheelchair protectors. –Implementation of best practice guidelines for ST prevention, education, documentation, management and dissemination of practice guidelines, with educational workshops for all nurses Used the ‘champions’ in ST who educated on the guide –Audit 2 months after completion of education	20 nurses/96 patients pre and 95 patients post audit Acute care, and rehabilitation units for older adults in two public hospitals	PPT presentation repeated several times (does not specify how many times) Educational materials are left at the workplace Areas of prevention, education, documentation and management were covered. Additional educational resources: ST management and prevention algorithm, ST classification	(a) There was change in compliance with ST guidelines in the audit following the implementation of best practice guidelines, with daily risk assessment by nurses and implementation of prevention strategies (b) Staff education increased from 20% to 98% (prevention and treatment) (c) ST hospital-acquired prevalence rate decreased from 10% to 0.15% (d) Champions in education helped with dissemination implementation and support during the night shift
Tamai et al., [32] Japan	Investigate the effectiveness of ST nursing education	Prospective, quasi-experimental, educational intervention study. Pre-study of ST incidence 1 month before educational intervention and 6 months post-intervention.	–Recruited older adults at ST risk, 1 month before the education seminar Evaluators assessed patients’ forearm once a month; received ST incidence reports from the hospital; investigators assessed ST and classified their severity by photos –Effectiveness of education was measured through the ST incidence 1 month before and 6 months after –Results of the two groups were compared and differences were considered statistically significant—Introduction of new prevention products (moisturisers, silicone adhesive bandages, foams and tapes, arm protectors), improved transfer technique, safer environmental reordering	42 nurses/97 patients Long-term care facilities	A face-to-face PPT session of 90 min Contents of the educational programme: ST definition, risk factors, classification, treatment, prevention and use of products	(a) Improving skills in ST identification and prevention (b) Decrease in the ST incidence from 2.1% before the seminar; 4.2% 1 month after the seminar; 1.1% 4 months after the seminar and 0%, 6 months after

facilitate staff care. A post-implementation follow-up audit was subsequently conducted, highlighting the importance of continuous education for healthcare staff, as well as for patients and their caregivers, in the effective prevention of skin tears.

### 3.2.2 | Evaluation of Educational Interventions

Knowledge level was measured before and after educational interventions in three investigations [9, 32, 33] using questionnaires developed by the authors and clinical audits. The process for developing the instruments in these studies was unclear. Pagan and Harvey [9] invited four nurses and two assistants to provide feedback on the instrument's feasibility. McTigue et al. [23] established the instrument's content validity through nurses experts completing online surveys. Lopez [36] conducted an audit to determine the ST prevalence and the extent to which best practice was implemented before and 2 months after the educational intervention according to the JBI PACES criteria PACES and Getting Research into Practice—GRIP programmes [23].

In the case of Tamai et al. [32, 33] the authors considered the efficacy of the educational programme by verifying a decrease in ST after 6 months of the intervention. McTigue et al. [23] highlighted the effectiveness of educating nurses on ST risk factors, classification, prevention and correct prevention and treatment, in addition to the incorporation into the service of specific prevention products. In general, the studies do not provide enough details on the evaluation of educational interventions by nurses, except for Pagan and Harvey [9], who evaluated them as very positive related to duration, support from complementary resources and organisational support, essential for the implementation and maintenance of changes in practice. There were also suggestions regarding its annual update and inclusion in the staff guidance.

### 3.2.3 | Preventive Measures Identified in the Studies

Using daily moisturisers for patients at risk, using silicone adhesive bandages and tapes, besides arm protectors, padding the furniture and artefacts with dangerous projections, rearranging the environment and improving the transfer techniques [9, 33] were identified as the recommended preventive measures incorporated into clinical practice to reduce ST incidence.

## 4 | Discussion

The scoping review was designed to map and examine the available literature on educational intervention programmes provided by nurses to nursing professionals in different services to prevent ST in hospitalised adults, including the elderly. To our knowledge, this is the first literature review providing information about the results of the implementation of two modalities of educational interventions [9, 23, 32, 33] to improve knowledge and nursing practices about ST prevention. One study demonstrated that education could reduce ST incidence [32] and prevalence [33].

While it is not the aim of a scoping review to assess the scientific quality of studies, the included studies are limited by their small

sample sizes, short follow-up times and inconsistent evaluation methods.

In this review, one of the two educational modalities consisted of educational material available on the institution's website [23] and the other one by presenting face-to-face classes at workplaces [9, 32, 33], all during the professionals' stay in the hospital. This has been pointed out as a facility that has improved adherence to the programme. Furthermore, in two of the articles [9, 33], the researchers raised the presence of champions, clinical consultant nurses trained to support education, mainly during night shifts, a fact also highly valued by all. Involving some heads of units to carry out some training for nurses leaving night shifts has been another very appropriate strategy, aiming for organisational support, a positive factor indicated by the participants in the interventions. To facilitate the implementation of educational interventions and for all professionals to attend training, the leadership and commitment of administrators and heads of units and of the institutions were fundamental, motivating and acting as facilitators for attendance at the educational programme and thus contributing to the success of the programme [37, 38]. Encouraging the participation of all participants by replacing shifts or conducting training during their work hours was key to ensuring that most of the staff attended the training.

The main information included in the training was on ST identification and classification, definition, risk factors, prevention and treatment, as well as the proper use of products, storage and conservation, which are also key points of theoretical training in any education programme [1, 3].

The results of the educational interventions were considered significant, as they generated a relevant increase in the knowledge of those who received the training [9, 23, 32, 33] and decreased ST incidence [32] or prevalence [33]. The decrease in ST incidence was attributed to the importance of educating all the personnel involved in the care and the acquisition of knowledge that allows improving the evaluation of patients at risk and correctly implementing preventive measures. Some preventive measures implemented were hydration of the residents' skin to keep it moisturised and reduce the ST occurrence [32]. Other elements such as arm protectors, the use of silicone adhesive tapes and silicone foams (Tamai et al. 2020) and correct transfer techniques [33] were also included; all of them are already part of the most up-to-date and evidence-based guidelines available [32, 33].

Although no other educational methodologies have been found for nursing professionals on ST prevention in adults and the elderly, there is evidence of the application of other strategies such as educational programmes based on the nurse competencies to support patient-centred care, effective nursing outcomes and staff satisfaction in wound care [39]. The application of the cycle of continuous improvement in the implementation of the pressure injuries best practices [40] may be another methodology to apply to the ST issue. Learning through interactive computer-based modules [41] or video game technologies is becoming a reality as they allow the limits of learning tools to be extended and generate a more realistic interactive experience, with better graphics and accessible to all. With them, gamification

is inserted as a feature to expand the limits of learning tools. An example of this is the development of a learning tool which aimed to promote an ST assessment experience for health professionals [42]; however, that has not been tested in a broader educational programme.

Two articles [9, 33] refer to the incorporation of 'Champions' in the implementation of educational interventions. They helped both in the leadership and in the appropriation of the programme, with an important role in educating the nurses, especially in the dissemination and implementation of the programme during night shifts [33]. The concept of 'Champions' in a recent publication by Santos et al. [43] states that the adoption of innovations improves when you engage individuals who facilitate implementation. Champions are individuals, healthcare providers or managers or non-professional people who volunteer or are appointed to enthusiastically promote and facilitate the implementation of an innovation [43, 44].

To reduce the occurrence of ST, it is necessary to integrate the recommendations of best practices for their prevention and management in clinical practice [1, 2] filling the current existent gap [1, 2, 45]. One reason that contributes to this gap is a lack of knowledge and a negative attitude towards its prevention [2, 45].

#### 4.1 | Future Research

The results of this scoping review cannot yet be generalised, with few studies included. The included studies do not reflect which intervention is better, or which favours the acquisition and retention of knowledge more effectively, besides which of them is more acceptable for health professionals. It is recommended to carry out new and broader studies, using other educational methodologies, such as the use of video games and gamification, and compare them versus the traditional methodology.

#### 4.2 | Strengths and Limitations of the Study

One of the first strengths of this scoping review is related to its originality in the English, Spanish and Portuguese literature. In the identified studies, all of them show a positive impact on the acquisition of knowledge and on the reduction of ST incidence or prevalence. As a limitation, the review included a small number of investigations identified in the databases on educational interventions aimed at preventing ST, perhaps due to the limit of languages included. The size of the samples was variable but small in all the articles, which also limits the generalisation of conclusions. On the other hand, the reviewed articles did not report studies that assessed nurses' knowledge using a specific and/or standardised tool designed to evaluate that, such as the one developed by Van Tiggelen and collaborators (Skin Tears Knowledge Assessment Instrument—OASES) [16].

### 5 | Conclusions

The scoping review found a limited number of studies on educational interventions promoted by nurses to nursing professionals to prevent ST in hospitalised adults and older adults.

The methodologies used to provide education were based on Information and Communication Technologies (ICTs) using the institution's Web and face-to-face educational sessions using PowerPoint presentations of 20–30–90 min in their workplaces. The support of the champions is evidenced as favourable in the application of the educational intervention. The training of personnel identified in the articles has a positive impact, allowing the raising of awareness of the problem, improving the records and assessment of wounds, allowing preventive measures to be established and adequate treatment to be implemented. In addition, having professionals trained in preventive measures affects the decrease in ST incidence and prevalence. More longitudinal studies are needed to see if the effects are maintained over time. Future research should examine other types of educational interventions and compare which intervention is more accepted by the participants and has a better impact on knowledge acquisition.

#### Acknowledgements

We would like to thank the Professors Dr. Dina de Almeida, Dr. Vilanice Alves and Dr. Lilia Nogueira, from JBI Brazil Comprehensive Systematic Review Training Program course for their support in discussion of the original protocol and the final manuscript; besides Evelyn Jiménez, librarian at Andrés Bello University.

#### Ethics Statement

The authors have nothing to report.

#### Conflicts of Interest

The authors declare no conflicts of interest.

#### Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author.

#### References

1. K. LeBlanc, K. Woo, D. Christensen, L. Forest-Lalande, and J. O'Dea, "Best Practice Recommendations for the Prevention and Management of Skin Tears," in *Foundations of Best Practice for Skin and Wound Management*, vol. 46 (woundscanada.ca, 2018), (A Supplement of Wound Care Canada), <http://www.woundscanada.ca/docman/public/health-care-professional/bpr-workshop/552-bpr-prevention-and-management-of-skin-tears/file>.
2. H. Van Tiggelen, K. LeBlanc, K. Campbell, et al., "Standardizing the Classification of Skin Tears: Validity and Reliability Testing of the International Skin Tear Advisory Panel Classification System in 44 Countries," *British Journal of Dermatology* 183, no. 1 (July 2020): 146–154, <https://doi.org/10.1111/bjd.18604>.
3. K. LeBlanc, K. Campbell, D. Beeckman, et al., "Best Practice Recommendations for the Prevention and Management of Skin Tears in Aged Skin," *Wounds International* (2018): 1–21, [www.woundsinternational.com](http://www.woundsinternational.com).
4. C. V. B. Da Silva, R. S. Da Costa Silva, C. V. Serna González, et al., "Epidemiología de los Desgarros de Piel: Revisión Bibliográfica," *Journal of Wound Care* 31 (2022): 7–18, [https://doi.org/10.12968/jowc.2022.31.LatAm\\_sup\\_6.7](https://doi.org/10.12968/jowc.2022.31.LatAm_sup_6.7).
5. J. Kottner, A. Lichterfeld, and U. Blume-Peytavi, "Maintaining Skin Integrity in the Aged: A Systematic Review," *British Journal of Dermatology* 169, no. 3 (2013): 528–542, <https://doi.org/10.1111/bjd.12469>.



6. K. LeBlanc and S. Baranoski, "Skin Tears: State of the Science," *Advances in Skin & Wound Care* 24, no. 9 (September 2011): 2–15, <https://doi.org/10.1097/01.ASW.0000405316.99011.95>.
7. K. LeBlanc and S. Baranoski, "Skin Tears: Finally Recognized," *Advances in Skin & Wound Care* 30, no. 2 (2017): 62–63, <https://journals.lww.com/00129334-201702000-00003>.
8. A. Lichterfeld, E. Hahnel, U. Blume-Peytavi, and J. Kottner, "Preventive Skin Care During Skin Aging," in *Textbook of Aging Skin* (Springer Berlin Heidelberg, 2015), 1–12. [https://doi.org/10.1007/978-3-642-27814-3\\_133-1](https://doi.org/10.1007/978-3-642-27814-3_133-1).
9. M. Pagan and P. Harvey, "Implementing a Pilot Skin and Wound Care Programme in Two Residential Aged Care Facilities," *Wound Practice and Research* 27, no. 4 (December 2019): 184–192, <https://doi.org/10.33235/wpr.27.4.184-192>.
10. G. R. P. Peres, C. V. B. Da Silva, K. C. Strazzieri-Pulido, and V. L. C. D. Santos, "Skin Tears in Older Adult Residents of Long-Term Care Facilities: Prevalence and Associated Factors," *Journal of Wound Care* 31, no. 6 (2022): 468–478, <https://doi.org/10.12968/jowc.2022.31.6.468>.
11. R. F. Holmes, M. W. Davidson, B. J. Thompson, and T. J. Kelechi, "Skin Tears: Care and Management of the Older Adult at Home," *Home Healthcare Nurse* 31, no. 2 (February 2013): 90–101, <https://journals.lww.com/00004045-201302000-00008>.
12. J. Kottner, D. Beeckman, A. Vogt, and U. Blume-Peytavi, "Skin Health and Integrity," in *Innovations and Emerging Technologies in Wound Care* (Elsevier, 2020), 183–196, <https://linkinghub.elsevier.com/retrieve/pii/B9780128150283000110>.
13. J. M. Levine, "Clinical Aspects of Aging Skin: Considerations for the Wound Care Practitioner," *Advances in Skin & Wound Care* 33, no. 1 (January 2020): 12–19, <https://doi.org/10.1097/01.ASW.0000613532.25408.8b>.
14. M. D. J. Peters and J. M. Campbell, "The Effectiveness of Treatments for Skin Tears in Older People: A Systematic Review Protocol," *JBIM Database of Systematic Reviews and Implementation Reports* 12, no. 11 (2014): 127–140, <https://journals.lww.com/01938924-201412110-00011>.
15. J. Stephen-Haynes, "The Prevention, Assessment and Management of Skin Tears," *Wounds UK* 13, no. 2 (July 2017): 58–65, <https://www.researchgate.net/publication/324154576>.
16. H. Van Tiggelen, P. Alves, E. Ayello, et al., "Development and Psychometric Property Testing of a Skin Tear Knowledge Assessment Instrument (OASES) in 37 Countries," *Journal of Advanced Nursing* 77, no. 3 (March 2021): 1609–1623, <https://doi.org/10.1111/jan.14713>.
17. K. Woo and K. LeBlanc, "Prevalence of Skin Tears Among Frail Older Adults Living in Canadian Long-Term Care Facilities," *International Journal of Palliative Nursing* 24, no. 6 (June 2018): 288–294, <https://doi.org/10.12968/ijpn.2018.24.6.288>.
18. Y. Y. Chang, K. Carville, and A. C. Tay, "The Prevalence of Skin Tears in the Acute Care Setting in Singapore," *International Wound Journal* 13, no. 5 (2016): 977–983, <https://doi.org/10.1111/iwj.12572>.
19. R. Serra, N. Lelapi, A. Barbetta, and S. De Franciscis, "Skin Tears and Risk Factors Assessment: A Systematic Review on Evidence-Based Medicine," *International Wound Journal* 15, no. 1 (February 2018): 38–42, <https://doi.org/10.1111/iwj.12815>.
20. K. C. Strazzieri-Pulido, G. R. P. Peres, T. C. G. F. Campanili, and V. L. C. De Gouveia Santos, "Incidence of Skin Tears and Risk Factors: A Systematic Literature Review," *Journal of Wound, Ostomy, and Continence Nursing* 44, no. 1 (2017): 29–33, <https://doi.org/10.1097/WON.0000000000000288>.
21. K. LeBlanc, K. E. Campbell, E. Wood, and D. Beeckman, "Best Practice Recommendations for Prevention and Management of Skin Tears in Aged Skin," *Journal of Wound, Ostomy, and Continence Nursing* 45, no. 6 (November 2018): 540–542, <https://journals.lww.com/00152192-201811000-00014>.
22. W. White, "Skin Tears: A Descriptive Study of the Opinions, Clinical Practice and Knowledge Base of RNs Caring for the Aged in High Care Residential Facilities," *Australian Journal of Wound Management* 9, no. 4 (2001): 138–149, [https://www.awma.com.au/files/journal/0904\\_01.pdf](https://www.awma.com.au/files/journal/0904_01.pdf).
23. T. McTigue, S. D'Andrea, J. Doyle-Munoz, and D. A. Forrester, "Efficacy of a Skin Tear Education Program," *Journal of Wound, Ostomy, and Continence Nursing* 36, no. 5 (2009): 486–492, <https://journals.lww.com/00152192-200909000-00004>.
24. M. D. J. Peters, C. Godfrey, P. McInerney, Z. Munn, A. Tricco, and H. Khalil, "Chapter 11: Scoping Reviews," in *JBIM Manual for Evidence Synthesis*, ed. E. Aromataris and Z. Munn (JBI, 2020), <https://doi.org/10.46658/JBIRM-20-01>.
25. M. D. J. Peters, C. Godfrey, P. McInerney, et al., "Best Practice Guidance and Reporting Items for the Development of Scoping Review Protocols," *JBIM Evidence Synthesis* 20, no. 4 (April 2022): 953–968, <https://doi.org/10.111124/jbies-21-00242>.
26. A. C. Tricco, E. Lillie, W. Zarin, et al., "PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation," *Annals of Internal Medicine* 169, no. 7 (October 2018): 467–473, <https://doi.org/10.7326/M18-0850>.
27. E. Aromataris, C. Lockwood, K. Porritt, B. Pilla, and Z. Jordan, eds., *JBIM Manual for Evidence Synthesis* (JBI, 2020), <https://doi.org/10.46658/JBIMES-24-01>.
28. M. Jordán Padrón, L. Pachón González, M. E. Blanco Pereira, and A. M. Achiong, "Elementos a Tener en Cuenta Para Realizar un Diseño de Intervención Educativa," *Rev Méd Electrónica* 33, no. 4 (2011): 540–546, <http://scielo.sld.cu/pdf/rme/v33n4/spu17411.pdf>.
29. M. Ouzzani, H. Hammady, Z. Fedorowicz, and A. Elmagarmid, "Rayyan—A Web and Mobile App for Systematic Reviews," *Systematic Reviews* 5, no. 1 (December 2016): 210, <https://doi.org/10.1186/s13643-016-0384-4>.
30. M. J. Page, J. E. McKenzie, P. M. Bossuyt, et al., "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews," *BMJ* 372, no. 71 (December 2021): 1–9, <https://doi.org/10.1136/bmj.n71>.
31. D. Pollock, M. D. J. Peters, H. Khalil, et al., "Recommendations for the Extraction, Analysis, and Presentation of Results in Scoping Reviews," *JBIM Evidence Synthesis* 21, no. 3 (March 2023): 520–532, <https://doi.org/10.111124/JBIES-22-00123>.
32. N. Tamai, M. Kuwata, T. Urai, et al., "Effect of an Education Program on the Prevention of Skin Tears for Nurses in a Japanese Long-Term Care Hospital: A Pre-Post Study," *Journal of Japanese Society of Wound, Ostomy and Continence Management* 24, no. 4 (2020): 379–387, [https://doi.org/10.32201/jpnwocm.24.4\\_379](https://doi.org/10.32201/jpnwocm.24.4_379).
33. V. Lopez, A. M. Dunk, K. Cubit, et al., "Skin Tear Prevention and Management Among Patients in the Acute Aged Care and Rehabilitation Units in the Australian Capital Territory: A Best Practice Implementation Project," *International Journal of Evidence-Based Healthcare* 9, no. 4 (December 2011): 429–434, <https://doi.org/10.1111/j.1744-1609.2011.00234.x>.
34. T. Woolhouse and S. Moola, "Evidence Based Approach to the Management and Prevention of Skin Tears Within an Aged Care Setting: A Best Practice Implementation Project," *JBIM Database of Systematic Reviews and Implementation Reports* 12, no. 9 (September 2014): 502–514, <https://doi.org/10.111124/jbisrir-2014-1674>.
35. R. Beechey, L. Priest, M. Peters, and C. Moloney, "An Evidence-Based Approach to the Prevention and Initial Management of Skin Tears Within the Aged Community Setting: A Best Practice Implementation Project," *JBIM Database of Systematic Reviews and Implementation Reports* 13, no. 5 (May 2015): 421–443, <https://doi.org/10.111124/jbisrir-2015-2073>.
36. O. D. Lopez-Cortes, A. Betancourt-Núñez, M. F. B. Orozco, and B. Vizmanos, "Scoping Reviews: A New Way of Evidence Synthesis,"

*Investig En Educ Medica* 11, no. 44 (October 2022): 98–104, <https://doi.org/10.22201/fm.20075057e.2022.44.22447>.

37. E. Ree, L. A. Ellis, and S. Wiig, “Managers’ Role in Supporting Resilience in Healthcare: A Proposed Model of How Managers Contribute to a Healthcare System’s Overall Resilience,” *International Journal of Health Governance* 26, no. 3 (October 2021): 266–280, <https://www.emerald.com/insight/content/doi/10.1108/ijhg-11-2020-0129/full/html>.

38. M. Tistad, S. Palmcrantz, L. Wallin, et al., “Developing Leadership in Managers to Facilitate the Implementation of National Guideline Recommendations: A Process Evaluation of Feasibility and Usefulness,” *International Journal of Health Policy and Management* 5, no. 8 (April 2016): 477–486, <https://doi.org/10.15171/ijhpm.2016.35>.

39. C. Renwick, “Development of the Wound Resource Education Nurse (WREN) Programme,” *British Journal of Nursing* 29, no. 15 (August 2020): S18–S23, <https://doi.org/10.12968/bjon.2020.29.15.S18>.

40. D. R. Berlowitz and R. A. Frantz, “Implementing Best Practices in Pressure Ulcer Care: The Role of Continuous Quality Improvement,” *Journal of the American Medical Directors Association* 8, no. 3 (2007): S38–S41, <https://doi.org/10.1016/j.jamda.2006.12.029>.

41. S. E. Durkin, “Tattoos, Body Piercing, and Healthcare Concerns,” *Journal of Radiology Nursing* 31, no. 1 (2012): 20–25, <https://www.sciencedirect.com/science/article/pii/S1546084311001660>.

42. V. Depassier, H. Hevia, and R. Torres, “A Virtual Platform Skin Tears Learning Tool,” in *40th International Conference of the Chilean Computer Science Society, SCCC 2021* (2021), <https://doi.org/10.1109/SCCC54552.2021.9650358>.

43. W. J. Santos, I. D. Graham, M. Lalonde, M. Demery Varin, and J. E. Squires, “The Effectiveness of Champions in Implementing Innovations in Health Care: A Systematic Review,” *Implementation Science Communications* 3, no. 1 (July 2022): 80, <https://doi.org/10.1186/s43058-022-00315-0>.

44. K. Bonawitz, M. Wetmore, M. Heisler, et al., “Champions in Context: Which Attributes Matter for Change Efforts in Healthcare?,” *Implementation Science* 15, no. 1 (December 2020): 62, <https://doi.org/10.1186/s13012-020-01024-9>.

45. H. E. Edwards, A. M. Chang, M. Gibb, et al., “Reduced Prevalence and Severity of Wounds Following Implementation of the Champions for Skin Integrity Model to Facilitate Uptake of Evidence-Based Practice in Aged Care,” *Journal of Clinical Nursing* 26, no. 23–24 (December 2017): 4276–4285, <https://doi.org/10.1111/jocn.13752>.

## Supporting Information

Additional supporting information can be found online in the Supporting Information section.