INTEGRATIVE REVIEW ARTICLE

REVISTA ENFERMAGEM ATUAL IN DERME

ELPO SCALE FOR RISK ASSESSMENT FOR INJURY IN THE SURGICAL CENTER IN THE INTRAOPERATIVE PERIOD: INTEGRATIVE REVIEW

ESCALA ELPO DE EVALUACIÓN DE RIESGO DE LESIÓN EN UN CENTRO QUIRÚRGICO INTRAOPERATORIAMENTE: REVISIÓN INTEGRATIVA

ESCALA ELPO DE AVALIAÇÃO DE RISCO PARA LESÃO EM CENTRO CIRÚRGICO NO INTRAOPERATÓRIO: REVISÃO INTEGRATIVA

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ABSTRACT
Aim: The aim of this study was to map the scientific publications that applied the ELPO Scale to assess the risk of injury in surgical centers during the intraoperative period. **Method**: This was a descriptive study, an integrative review, using the Scopus and Lilacs (Latin American and Caribbean Literature in Health Sciences) databases, the CAPES and BVS (Virtual Health Library) Periodicals portals, and the PubMed (National Library of Medicine) library, using the Boolean operators OR and AND, and a time frame between 2019 and 2023. **Results**: The data were analyzed using the IRAMUTEQ software and presented in the form of Word Clouds, Similarity Analysis of textual corpuses, and Dendrograms. Thirteen articles were obtained, eight in Portuguese and five in English. The Virtual Health Library was the database with the most publications, with a higher incidence of cross-sectional research. Data from medical records, nurses, and patients were used as a sample of publications. There was a greater publication of articles in the Latin American Journal of Nursing (RLAE) and the Gaúcha Journal of Nursing. The most frequent Level of Evidence is Level IV. **Final Considerations**: It is concluded that pressure injury can be caused by a variety of factors in the perioperative period, including personal characteristics of the patient and factors inherent to the anesthetic-surgical procedure. It is also inferred that the ELPO Scale is a useful scientific instrument to assess the risk of pressure injury during surgical positioning in the perioperative period.
Keywords: Perioperative Nursing; Pressure Injury; Patient Positioning.

RESUMEN
Objetivo: El objetivo es mapear las publicaciones científicas que aplicaron la Escala de Evaluación de Riesgo ELPO para lesiones en el centro quirúrgico durante el intraoperatorio. **Método**: Investigación descriptiva, tipo revisión integrativa, utilizando las bases de datos Scopus y Lilacs (Literatura Latinoamericana y del Caribe en Ciencias de la Salud), los portales de Revistas CAPES y BVS (Biblioteca Virtual en Salud) y la biblioteca PubMed (Biblioteca Nacional de Medicina), con el Operadores booleanos OR y AND, y un marco temporal entre 2019 y 2023. **Resultados**: Los datos se analizaron mediante el software IRAMUTEQ y presentado en forma de Nubes de Palabras, Análisis de Similitud de corpus textuales y Dendrograma. Se obtuvieron 13 artículos, ocho en portugués y cinco en inglés. La Biblioteca Virtual en Salud fue la base de datos con más publicaciones, con mayor incidencia en investigaciones transversales. Se observan datos de historias clínicas, enfermeras y pacientes como muestra de publicaciones. Se identifica mayor publicación de artículos en la Revista Latino-Americana de Enfermagem (RLAE) y la Revista Gaúcha de Enfermagem. El nivel de evidencia más incidente es el nivel IV. **Consideraciones finales**: Se concluye que las lesiones por presión pueden ser causadas por una variedad de factores en el período perioperatorio, incluyendo las características personales del paciente y factores inherentes al procedimiento anestésico-quirúrgico. También se infiere que la Escala ELPO es un instrumento científico útil para evaluar el riesgo de lesiones por presión durante el posicionamiento quirúrgico en el período perioperatorio.
Palabras clave: Enfermería Perioperatoria**;** Lesión por Presión; Posicionamiento del Paciente.

RESUMO
Objetivo: Objetiva-se mapear as publicações científicas que aplicaram a Escala ELPO de avaliação de risco para lesão em centro cirúrgico no período intraoperatório. **Método:** Pesquisa descritiva, tipo revisão integrativa, optou-se pelas bases de dados *Scopus* e *Lilacs* (Literatura Latino-americana e do Caribe em Ciências da Saúde), nos portais Periódicos CAPES e BVS (Biblioteca Virtual em Saúde) e na biblioteca *PubMed* (*National Library of Medicine*), com os operadores booleanos *OR* e *AND*, e recorte temporal entre 2019 a 2023. **Resultados:** Analisou-se os dados com a aplicação do software *IRAMUTEQ* e apresentados em forma de Nuvens de Palavras, Análise de Similitude dos *corpus* textuais e Dendograma. Obteve-se 13 artigos, oito em português e cinco em inglês. A Biblioteca Virtual de Saúde foi à base de dados com mais publicações, com maior incidência em pesquisas transversais. Observa-se dados de prontuários, enfermeiros e pacientes como amostra das publicações. Identifica-se maior publicação de artigos na Revista Latino-Americana de Enfermagem (RLAE) e Revista Gaúcha de Enfermagem. O Nível de Evidência mais incidente é o Nível IV. **Considerações Finais:** Conclui-se que a lesão por pressão pode ser causada por uma variedade de fatores no período perioperatório, incluindo características pessoais do paciente e fatores inerentes ao procedimento anestésico-cirúrgico. Infere-se ainda que a Escala ELPO seja um instrumento científico útil para avaliar o risco de lesão por pressão durante o posicionamento cirúrgico no perioperatório.
Palavras-chave: Enfermagem Perioperatória; Lesão por Pressão; Posicionamento do Paciente.

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INTRODUCTION

The Surgical Center (SC) is a restricted and critical area, with highly complex surgical procedures, likely to pose a safety risk to the patient and generate adverse events (AE), which are quality indicators, during hospitalization. Among the AEs resulting from surgical positioning: musculoskeletal pain, joint dislocation, peripheral nerve damage, pressure injury (PI), cardiovascular and pulmonary impairment, and compartment syndrome[1].

According to the WHO, Ordinance No. 529 (2013), patient safety is defined as "reducing to an acceptable minimum the risk of unnecessary harm associated with health care"[2,3]. The safe surgery protocol was created, the purpose of which is to reduce the occurrence of incidents and AEs and surgical mortality. The nurse in the perioperative period must plan nursing actions that can reduce, prevent complications and errors resulting from the anesthetic-surgical procedure, minimizing potential risks[4].

Nursing plays an important role in the SC due to its theoretical-scientific and practical knowledge in the perioperative period. Thus, the Systematization of Perioperative Nursing Care (SAEP) is a care model that aims to minimize the risks related to surgery[5,6].

Therefore, when positioning the patient on the operating table, a tool must be applied to detect the risk of postoperative complications, which is the Risk Assessment Scale for the Development of Injuries Resulting from the Surgical Positioning of the Patient, called the ELPO Scale. Instrument developed and validated in Brazil in 2013, in the doctoral thesis entitled: "Scale for assessing the risk of developing injuries resulting from surgical positioning: construction and validation", by Dr. Camila Mendonça de Moraes Lopes, with the purpose of guiding the clinical practice of perioperative nurses[7,8].

Early identification of the risk of perioperative PI through risk assessment scales such as the ELPO Scale is an important step in preventing complications[9] and aims at the adequate and safe positioning of surgical patients[4].

The ELPO Scale includes seven points: type of surgical positioning, duration of surgery, type of anesthesia, support surface, position of the limbs, comorbidities and age of the patient. The score ranges from seven to 35 points; the higher the score, the greater the risk of the patient developing perioperative injury during surgical positioning [6] and each additional point on the scale increases the probability of developing PI by 44% [1,4,9,10].

Therefore, the objective is to map the scientific publications that applied the ELPO Scale for assessing risk for injury in the surgical center during the intraoperative period.

METHODS

Descriptive research, integrative review type, carried out through six phases: 1) identification of the research theme and question; 2) inclusion/exclusion criteria; 3) definition of information and categorization; 4) evaluation of

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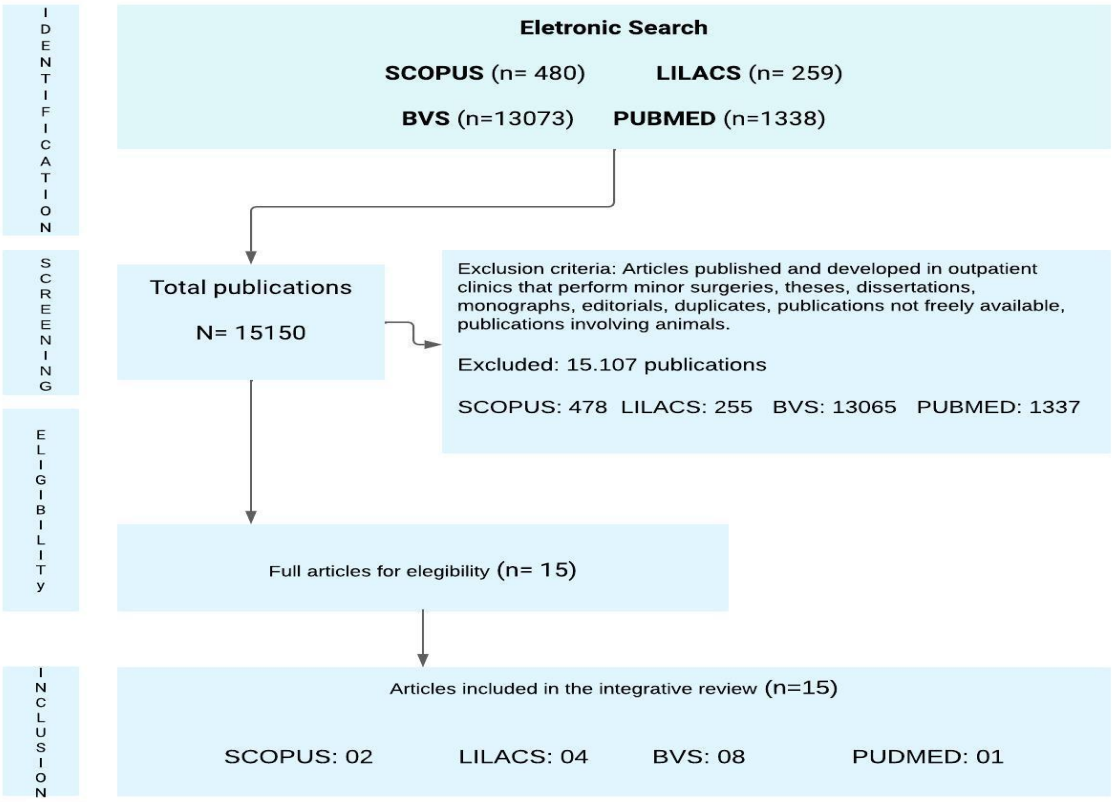
studies; 5) interpretation of results and, 6) review and synthesis of knowledge[11].

The question was guided by: “What are the scientific publications on the application of the ELPO Scale for assessing the risk of pressure injury in the surgical center by the multidisciplinary team during the intraoperative period?” The search for articles was carried out in the CAPES Portal and databases: Scopus (Elsevier), Lilacs (Latin American and Caribbean Literature in Health Sciences), BVS (Virtual Health Library) and in the PubMed library (National Library of Medicine). We chose to combine and cross-reference the descriptors with the AND and OR operators: “Perioperative Nursing”; “Intraoperative Period”; Pressure Injury”; “Risk assessment”; “Patient positioning”; “Prevention”; “Nursing care”, “Patient safety” and their respective translations into English (“Perioperative Nursing”; “Intraoperative period”; “pressure injury”; “Risk assessment”; “Patient Positioning”; "Prevention"; "Nursing care"; “Patient safety”), and Spanish (“Enfermería Perioperatoria”; “período intraoperatorio”; “lesión por presión”; “Evaluación de risgos”; “Posicionamiento del paciente”; "Prevención"; "Cuidado de enfermera"; “Seguridad del paciente”).

Original, complete articles that addressed the guiding question were included, from national and international journals, available in English, Spanish and Portuguese, online, with a time frame between 2019 and 2023, in a surgical center. Articles developed in outpatient clinics with minor surgeries, theses, dissertations, monographs, editorials, articles involving animals and duplicates were excluded.

Figure 1 shows the flowchart of the search strategy for articles in the selected databases. A total of 472 articles were identified in the Scopus, LILACS (251), BVS (13,066) and PubMed (1,331) databases, totaling 15,120 publications. After reading the titles, abstracts and full text, 15,107 articles that did not meet the inclusion criteria were excluded, resulting in 13 publications.

Figure 1. Flowchart of the article search strategy. Cuité- PB, Brazil, 2024.



For analysis and synthesis of the results, an instrument was applied with the order number of the articles, identified by the letter "P" and numbers (P1, P2, ... P13), author/year, country, database, title, method, sample, journal, objectives, conclusion and Level of Evidence (LE), and each article was classified: Level I (systematic review or meta-analysis of randomized controlled clinical trials); Level II (evidence from at least one well-designed randomized controlled clinical trial); Level III (well-designed clinical trials without randomization); Level IV (well-designed cohort and case-control studies); Level V (systematic review of descriptive and qualitative studies); Level VI (evidence from a single descriptive or qualitative study); and Level VII (opinion of authorities and/or report of expert committees)[12].

Data were collected between September/2023 and March/2024 and the software Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ), version 0.7 alpha 2, was applied to analyze the data[13], presented by Word Clouds, Similarity Analysis of Textual Corpuses and Finger Diagram.

RESULTS

The sample consisted of 13 articles, extracted from national and international journals, according to the eligibility criteria, as shown in Table 1.

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Table 1 - Summary of publications. Cuité-PB, 2024.

Nº Article/Author/ ear/ Country	Database	Method	Sample	Magazine	NE*
P1[1] Brazil	BVS	Transversal	154 pacients	SOBECC	VI
P2[14] Brazil	BVS	Longitudinal observational	239 pacients	Acta Paulista de Enfermagem	III
P3[15] Brazil	BVS	Transversal	50 medical records	Cuidarte Enfermagem	IV
P4[3] Brazil	Scopus	Cohort, observational	52 pacients	Research, Society and Development	IV
P5[16] Brazil	Lilacs	Case report	109 professionals	International Journal of Nursing Knowledge	VI
P6[17] Brazil	BVS	Transversal	146 pacients	Baiana de Enfermagem	III
P7[4] Brazil	PubMed	Analytical, longitudinal	106 pacients	RLAE	IV
P8[18] Brazil	Lilacs	Observational, transversal	82 pacients	Contribuciones a Las Ciencias Sociales	VI
P9[19] Brazil	BVS	Analytical, longitudinal	45 pacients	Gaúcha de Enfermagem	IV
P10[9] Brazil	BVS	Observational, longitudinal, prospective	278 pacients	RLAE	IV
P11[20] Brazil	Scopus	Observational, longitudinal, prospective	135 pacients	ESTIMA	IV
P12[21] Brazil	BVS	Cross-sectional, exploratory, quantitative	24 pacients	Revista Cereus	VI
P13[22] Brazil	BVS	Exploratory, descriptive, qualitative	07 nurses	Gaúcha de enfermagem	VI

* NE (Level of evidence)

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Publications were identified in 2019 (n=4), 2021 (n=3) and 2022 (n=3), eight articles in Portuguese and five in English, by different authors and published in Brazil. The database with the largest number of publications was BVS (P1, P2, P3, P6, P9, P10, P12 and P13), followed by Lilacs (P5 and P8), Scopus (P4 and P11) and PubMed (P7). Cross-sectional (P1, P3, P6 and P12), Observational, longitudinal (P2) and prospective (P10 and P11); Observational and Cross-sectional (P8); Cohort and observational (P4); Analytical and longitudinal (P7 and P9); Qualitative (P13), and Case Report (P5) research was identified. There was a variety of samples: medical records (P3), nurses (P13), and patients with a sample size between 24 and 278. Publications were identified in RLAE (P7 and P10), Revista Gaúcha de Enfermagem (P9 and P13), and Revista da SOBECC (P1), the others in different journals. Regarding the Level of Evidence (LE), the most prevalent were Level IV (P3, P4, P7 P9, P10 and P11), followed by Level VI (P1, P5, P8, P12 and P13), and Level III (P2 and P6).

Table 2 summarizes the title, objective and conclusion of each article.

Table 2 - Summary with title, objective and conclusion. Cuité, PB, 2024.

Nº	Title	Aim	Conclusion
P1	Factors associated with skin lesions resulting from the intraoperative period	To evaluate the occurrence of skin lesions in the intraoperative period resulting from surgical procedures performed in a large university hospital.	Among the patients who presented skin lesions due to surgical positioning, the majority were classified by ELPO as high risk, which leads us to believe that this is an adequate scale for assessing the risk of skin lesions in surgical patients.
P2	Application of the ELPO scale in patients undergoing cardiovascular surgeries	Apply the ELPO scale and evaluate the scores according to the score obtained by patients undergoing cardiovascular surgeries.	The ELPO scale is a valid and reliable instrument for assessing the risk of developing LP resulting from surgical positioning, as well as anatomical and physiological changes in the patient's body.
P3	Risk assessment for the development of perioperative lesions due to surgical positioning	To evaluate the risk of developing perioperative lesions due to surgical positioning in patients submitted to elective surgeries.	It is concluded that 31.1% of participants are at high risk for developing positional injuries, related to age and comorbidities.
P4	Risk assessment for perioperative pressure injuries	To evaluate and classify patients according to the Risk Assessment Scale for Perioperative Pressure Injuries; verify the association between sociodemographic and clinical variables and the risk score; and identify the occurrence of pressure injuries	Most of the participants presented a high risk for development of perioperative decubitus ulcers. The female sex, elderly group, and altered body mass index were significant factors for increased risk. The Risk Assessment Scale for Perioperative Pressure Injuries allows the early identification of

		due to surgical positioning.	risk of injury, subsidizing the adoption of preventive strategies to ensure the quality of perioperative care.
P5	Risk for surgical positioning injuries: scale validation in a rehabilitation hospital	To validate the Risk Assessment Scale for the Development of Injuries due to Surgical Positioning in the stratification of risk for injury development in perioperative patients at a rehabilitation hospital.	The scale validation is shown by the association of scores with the appearance of injuries, therefore, it is a valid and useful tool, and it can guide the clinical practice of perioperative nurses in rehabilitation hospitals in order to reduce risk for injuries due to surgical positioning.
P6	Pressure injury resulting from surgical positioning and associated factors	Analyze the occurrence of pressure injuries resulting from surgical positioning and associated factors.	The high occurrence and associated factors for LP resulting from surgical positioning were evidenced results that can help in understanding the problem in the national scenario, and for the implementation of interventions with the purpose of reducing the patient's risk of being affected by this type of injury in the perioperative period.
P7	Incidence of pressure injury and risk assessment using the ELPO scale: an observational study	To assess the risk of developing pressure injuries related to surgical positioning and their incidence in the surgical center of a University Hospital in Rio de Janeiro, using the risk assessment scale for the development of injuries resulting from the surgical positioning of the patient (ELPO).	The scale was useful for risk assessment and allowed optimizing preventive actions for LP. The need to use the ELPO scale in clinical practice is recommended and corroborated in order to predict the risk of LP development in surgical patients and, consequently, the implementation of preventive measures related to each surgical situation.
P8	Risk Assessment of Postoperative Complications Resulting from Poor Surgical Positioning	To assess the risk of developing injuries resulting from surgical positioning in patients undergoing surgery at a Trauma Hospital, using the Risk Assessment Scale for the Development of Injuries Resulting from Surgical Positioning (ELPO).	Most patients had a high risk of developing complications resulting from surgical positioning, and the risk of LP was higher in the postoperative period. It is suggested that the ELPO scale be applied and that appropriate devices and equipment be used in routine perioperative care.
P9	Knowledge translation for nursing care for patients with Risk of perioperative positioning injury: A case report	Apply the Advanced Nursing Process and demonstrating procedures of surgical positioning, as well as to show the participating the Nursing Outcomes Classification findings in order to translate the knowledge on specific	Nursing teams play a prominent role in positioning patients for surgery, protecting them in a moment of extreme vulnerability, thus making knowledge about the fundamental elements of surgical positioning essential. This emphasizes the importance of

		preventive perioperative positioning into practice, the review of clinical protocols and nursing care plan.	training, and of reviewing protocols and records of procedures that promote safety to patients and care teams.
P10	Risk of injury related to surgical positioning: assessment in a Brazilian University Hospital	Assess the risk of developing injuries related to surgical positioning.	Around a quarter of the sample had a higher risk of injury resulting from the surgical position.
P11	Nurses' conceptions regarding patient safety during surgical positioning.	To know the conceptions regarding patient safety during their surgical positioning from the perspective of nurses in a Surgical Center.	Nurses identified risk to patient safety in relation to surgical positioning and considered they presence in the operating room to be indispensable.
P7	Risk for surgical positioning injuries: scale validation in a rehabilitation hospital	To validate the Risk Assessment Scale for the Development of Injuries due to Surgical Positioning in the stratification of risk for injury development in perioperative patients at a rehabilitation hospital.	The scale validation is shown by the association of scores with the appearance of injuries, therefore, it is a valid and useful tool, and it can guide the clinical practice of perioperative nurses in rehabilitation hospitals in order to reduce risk for injuries due to surgical positioning.
P12	Risk of injuries resulting from surgical positioning in adult and elderly patients: a comparative study	To compare the risk of injuries due to surgical positioning in adults and elderly people using the risk assessment scale for the development of injuries resulting from surgical positioning.	Most elderly participants were at high risk for developing perioperative positioning injury. Surgical position and anesthesia were significant factors for increased risk.
P13	Risk of injury development due to surgical positioning: an observational study	Classify the risk of developing surgical positioning injury.	There was a higher risk of developing injury due to surgical positioning and a low incidence of PI. Perioperative nursing should incorporate validated risk measurement tools into care practice for safe, individualized and quality care for surgical patients.

Regarding the titles, P3 and P4 refer to the acronym "ELPO"; and P1 and P12 describe "ELPO" in the conclusion of the articles. P2, P6, P7, P8, P9, P11, P12 and P13 title the topic as "Surgical Positioning", P5 as "Perioperative Positioning" and P10 as "Perioperative Pressure Injury".

Different verbs can be observed in the objectives: Evaluate (P1, P4, P6, P9, and P12), Apply (P3 and P5), Analyze (P2), Validate (P7), Compare (P8), Know (P13), Classify (P11) and article P10 used the verbs "Evaluate and Classify", "Verify" and "Identify".

It was identified that P5, P7, P9, P10 and P13 were published in English, in different journals. Regarding the conclusion of the articles, the sample was classified as "high risk" when they applied ELPO (P1, P6, P8, P9, P10,

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P11 and P12); P5 and P13 emphasized “patient safety during surgical positioning”; P3 inferred “reliable and useful instrument” in cardiovascular surgeries; P7 “It is a valid and useful tool”; P2 the “high occurrence and associated factors” that help in understanding the problem and implementing interventions; and P4 “optimizing preventive actions”.

DISCUSSION

Issues related to PI, including risk, comorbidities, and others, represent an obstacle for Nursing, associated with multiple factors[10]. Variables such as female gender, elderly, and altered BMI (Body Mass Index) presented statistically significant results, being contributing factors to the risk of perioperative PI[9,19].

BMI > 30 kg/m2 was a factor for PI ($p < 0.001$)[9] overweight and high obesity (BMI of 25 kg/m2)[10] as well as DM, hypertension, and malnutrition[1,3,4].

For the ELPO Scale, the longer the surgery time, the greater the chances of postoperative complications [15], in addition, major surgeries are a risk factor for PI[3,14,17], and the risk increases by 1.07 for each hour of surgery[4,9,10]. Periods of immobilization, duration of the anesthetic-surgical procedure during the intraoperative period also characterize a significant risk fator[1,4,9,21], as does a surgery time greater than two hours[1,10,18,19,20,21].

With each hour added to the surgery, the incidence of developing LP increases considerably, with a risk of 48%[10,20]. Regardless of the duration and size of the surgery, positioning should be performed in a way that prevents injuries[17].

Another risk factor during the intraoperative period is the type of anestesia[1,4,9,15,17], with patients undergoing general anestesia[1,14,15,18], as well as the combined form of general and regional anesthesia[1,20], regional anesthesia with sedation[21], general and subarachnoid anesthesia[15].

The greater the variation during surgical positioning, the greater the degree of impairment and complications[15], The supine position obtained the highest frequency in anesthetic-surgical procedures[1,3,4,14,17-21], followed by the prone position[1,4,10]; lithotomy position, which offers the highest risk of complications[3,9], and Trendelenburg[9], and incidence of braces on upper limbs (<90º)[4,17,18,20].

The nurse aims to reduce, relieve and redistribute pressure to minimize the risk of PI with support surfaces[17], joint support, minimizing pressure points[20], propose correct and safe positioning[9], corroborating the SOBECC guidelines, considering the degree of complexity in surgical positioning[6,22]. Therefore, there should be training, prevention strategies and protocols with the multidisciplinary team in the surgery center[1].

Research considers the following as support/devices to prevent PI: viscoelastic positioners, prophylactic adhesive dressings[1,3,15,17,21], cotton cushions[14], foam surgical table mattress and cushions[4], and cotton pads[19].

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The National Pressure Injury Advisory Panel (NPIAP) classifies PI into stages 1, 2, 3, and 4, unclassifiable, deep tissue, medical device-related, and membrane and mucous membranes. Damage to LP can range from mild to severe, with stages 3 and 4 of LP being considered never events[10,23]. It is inferred that stage 1 is more frequent in perioperative injuries[1,3,4,10]; in the sacral region, elbow, and heel because they are bony prominences[18]; the chest, gluteal region, and face were evidenced[1,10]. LP can be observed up to five days postoperatively[20].

Therefore, the ELPO Scale becomes a fundamental evidence-based tool in view of the need to prevent LP, and it becomes essential for individualized risk assessment during the surgical procedure[3].

According to NPIAP, structured risk assessment is part of the screening policy, with the aim of investigating patients at risk of developing PI, in order to plan and implement preventive interventions to minimize possible risks. It is a valid and reliable instrument. Therefore, the ELPO Scale has proven to be effective as a risk assessment instrument for PI, covering all these requirements[10,21,23].

In addition, the use of information and communication technologies, using smartphones, which facilitate the care needs of critically ill patients, and that professionals are informed in real time of the patient's clinical situation during care, can be inferred as an allied instrument for quality care[24].

Therefore, to avoid PI during surgical positioning, it is essential to adopt preventive measures that identify risk factors during the anesthetic-surgical procedure, from body alignment, surgery time, the use of support surfaces with adequate limb angulation, and providing safe surgery to the patient. patient, assisting the multidisciplinary team in detecting patients at risk of developing LP, and thus promoting effective interventions based on scientific evidence by applying the ELPO Scale in the perioperative period.

Furthermore, the IRAMUTEQ software was applied in this research, using the conclusion excerpt (Table 2) of the 13 publications, presented by the Word Cloud (Figure 6), Similarity Analysis of the Textual Corpus (Figure 7), and Dendrogram-Phylogram (Figures 8 and 9).

In the Word Cloud, the terms that obtained the highest relative frequency were: “risk” (n=28); “patients” (n=27); “surgical” (n=21); “injury” (n=20); “positioning” (n=19), “study” (n=16); “ELPO” (n=13) and “LP” (n=10), which took a central position and were larger in size in relation to the other words.

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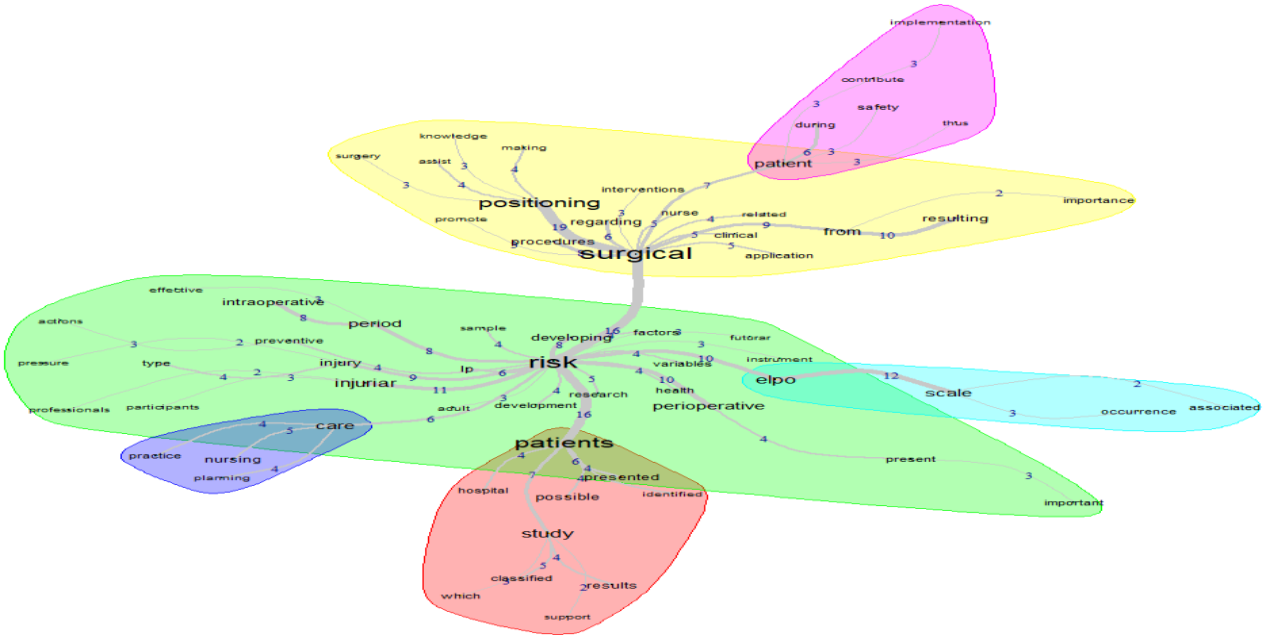
Figure 6 - Word cloud. Cuité, PB, 2024.

In the representation between the terms selected in the data processing based on the Similarity Analysis of the textual corpus (Figure 7), a semantic range of frequent words is observed: “Risk”, “Patient”, “Surgical”, “Positioning” and “Injury”.

Figure 7 - Similarity Analysis of the textual corpus. Cuité, PB, 2024.



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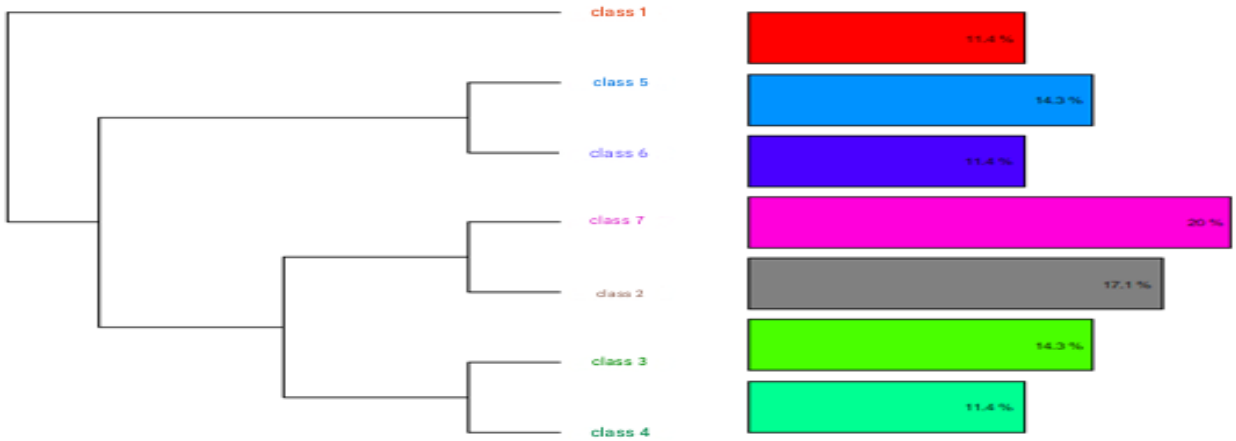
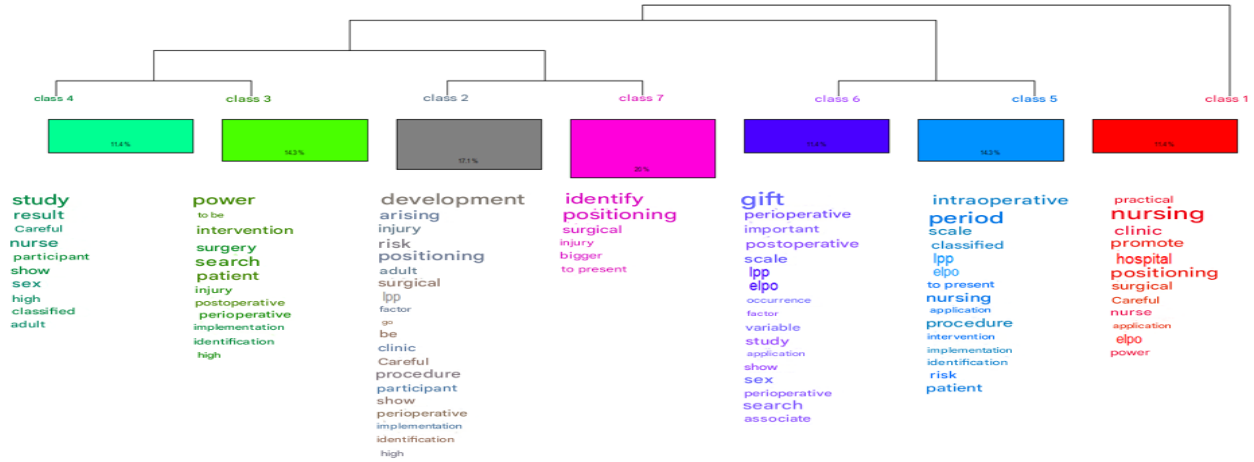
Through the Descending Hierarchical Classification (DHC) - Reinert Method, the Dendrogram was obtained, and seven classes were generated. The aim is to obtain classes of Text Segments that, at the same time, present similar vocabulary among themselves, and different from the segments of the other classes[25]. First, the corpus was divided into three subgroups. Secondly, the lower subgroup was subdivided into two. Thus, the upper subgroup resulted in class 1. The central subgroup resulted in class 5 and class 6. The lower subgroup resulted in class 7 and class 2; class 3 and class 4. This means that classes 5 and 6 have the greatest relationship, as well as class 7 with class 2 and class 3 with class 4, with class 1 having the least relationship with the others (Figure 8).

Figure 8 - Dendrogram. Cuité, PB, 2024.



The CHD stabilized at this point, as the seven classes were stable, that is, composed of Elementary Context Units (ECU) with similar vocabulary, represented in the phylogram (Figure 9).

Figure 9 - Dendrogram-Phylogram. Cuité, PB, 2024.



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CONCLUSIONS

It can be inferred that by mapping the 13 scientific publications, it was possible to identify factors that contribute to the development of pressure injuries in the perioperative period, including patient aspects (sex, age group, comorbidities), as well as particularities in the surgical procedure (duration of surgery, type of anesthesia, surgical position, limb angulation, and use or not of support surfaces). It is evident that these aspects influence the complication of PI, when applied to the ELPO Scale, represented by the increase in the score.

In addition, the ELPO Scale is an effective tool in assessing patient risks during surgical positioning, and the multidisciplinary team is essential for assisting in decision-making in the perioperative period, also guiding nursing interventions, related to evidence-based scientific knowledge.

Therefore, this integrative review may contribute to providing important scientific evidence related to publications that applied the ELPO Scale for risk assessment in the perioperative period.

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Laís Kailane Duarte Costa. Data collection, analysis and interpretation of data, writing of the article

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Isolda Maria Barros Torquato. Critical review and final review.

Adriana Montenegro de Albuquerque. Conception and design, data collection, data analysis and interpretation, writing of the article, critical review, final review.

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Declaration of conflict of interest

Nothing to declare.

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