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Mapping surgical positioning competencies: content validation through the Delphi technique

Mapeamento de competências do posicionamento cirúrgico: validação de conteúdo por técnica Delphi

Mapeo de las competencias de posicionamiento quirúrgico: validación del contenido mediante la técnica Delphi

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Abstract

Aim: To validate surgical positioning competencies with expert judges in perioperative nursing using the Delphi technique. **Methods:** Validation study of a competence-related instrument via Delphi. Five expert judges in perioperative issues, selected through the Lattes Platform, received an invitation and the instrument for assessment in terms of relevance, pertinence, clarity, and applicability. The data were analyzed using the Content Validity Index (CVI). **Results:** In the first round, there was agreement in 97.03% (n=98) of the items, with CVI greater than 0.90 in 89 of the 101 items, and only two items with CVI < 0.80. The total CVI was 0.95. In the second round, agreement was 88.12% (n=89) of the items, with a total CVI of 0.93. **Conclusion:** The judges showed high agreement on the content. Two items with low agreement were kept by the researcher, as they were considered important for assessing the risk of injury due to positioning and the need for repositioning during long procedures or with patient movement.

Descriptors: Perioperative nursing; Perioperative care; Patient positioning; Professional competence; Validation study.

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Whats is already known on this?
The literature highlights the importance of nurses in surgical positioning for patient safety, but there is a shortage of validated instruments for assessing and developing positioning competencies.

What this study adds?
The study validates a specific instrument for assessing nurses' competencies in surgical positioning, contributing to self-assessment, patient safety, and the quality of perioperative care.

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Resumo

Objetivo: *Validar competências de posicionamento cirúrgico com juízes experts em enfermagem perioperatória usando a técnica Delphi.* ***Método:*** *Estudo de validação de um instrumento de competências via Delphi. Cinco juízes experts em perioperatório, selecionados pela Plataforma Lattes, receberam convite e o instrumento para avaliação em termos de relevância, pertinência, clareza e aplicabilidade. Os dados foram analisados pelo Índice de Validade de Conteúdo (IVC).* ***Resultados:*** *Na primeira rodada, houve concordância em 97,03% (n=98) dos itens, com IVC superior a 0,90 em 89 dos 101 itens, e apenas dois itens com IVC < 0,80. O IVC total foi de 0,95. Na segunda rodada, a concordância foi de 88,12% (n=89) dos itens, com IVC total de 0,93.* ***Conclusão:*** *Os juízes demonstraram alta concordância quanto ao conteúdo. Dois itens com baixa concordância foram mantidos pelo pesquisador, por serem considerados importantes para avaliar o risco de lesão por posicionamento e necessidade de reposicionamento em procedimentos longos ou com movimentação do paciente.*

Descritores: *Enfermagem perioperatória; Assistência perioperatória; Posicionamento do paciente; Competência profissional; Estudo de validação.*

Resumén

Objetivo: *Validar las competencias de posicionamiento quirúrgico con jueces expertos en enfermería perioperatoria empleando la técnica Delphi.* ***Metodo:*** *Estudio de validación de un instrumento de competencias con la Delphi. Cinco jueces expertos en perioperatorio, seleccionados mediante la Plataforma Lattes, recibieron una invitación y el instrumento para su evaluación en términos de relevancia, pertinencia, claridad y aplicabilidad. Los datos se analizaron utilizando el Índice de Validez de Contenido (IVC).* ***Resultados:*** *En la primera ronda, hubo acuerdo en el 97,03% (n=98) de los ítems, con IVC superior a 0,90 en 89 de 101 ítems, y solo dos ítems con IVC < 0,80. El IVC total fue de 0,95. En la segunda ronda, el acuerdo fue del 88,12 por ciento (n=89) de los ítems, con un IVC total de 0,93.* ***Conclusión:*** *Los jueces mostraron un alto grado de acuerdo sobre el contenido. El investigador mantuvo dos ítems con un acuerdo bajo, por considerarlos importantes para evaluar el riesgo de lesiones debidas al posicionamiento y la necesidad de reposicionamiento en procedimientos largos o con movimiento del paciente.*

Descriptores: *Enfermería perioperatoria; Atención perioperativa; Posicionamiento del paciente; Competencia profesional; Estudio de validación.*

INTRODUCTION

Proper surgical positioning of patients requires the knowledge, skills, and coordination of the health team, as ensuring the safety and comfort of patients during the intraoperative period is essential.[1] However, in order to achieve high levels of quality health care, perioperative nurses must have a firm understanding of the complex knowledge, skills, and guidelines that underpin the perioperative nursing profession.[2] A systematic review highlights that proper patient positioning is directly related to the safety and effectiveness of surgical procedures.[3] Therefore, the role played by nurses is crucial, as their actions and decisions during positioning, as well as their greater presence in the operating room, contribute to patient safety and result in professional empowerment, thus strengthening the recognition of the medical team and nursing technicians.[4]

Competence is evidenced by appropriate performance through the mobilization of knowledge, skills, and attitudes.[5] In nursing, competence is defined as the combination of skills, knowledge, values, and attitudes that enable effective performance.[6] Nurses' perception of their competence is essential to their professional identity, influencing not only individual performance and teamwork but also job satisfaction and the recruitment and retention of professionals.[7]

Professional competence in nursing is a complex and dynamic concept. As the concept of clinical competence evolves with the rapid advances in science and technology, its ongoing assessment becomes a permanent field of study in nursing.[8] In addition, it is common to categorize nurses according to their experience – junior, full, and senior – thus facilitating the sharing of knowledge and the evolution of the team. However, the literature still lacks specific definitions of the competencies required for surgical positioning, which hinders self-assessment and the development of practical skills.

Clearly defining the competencies related to surgical positioning allows perioperative nurses to assess and improve their own skills, as well as guiding collaborators and students, contributing to professional training. The practice of positioning surgical patients is often based on informal knowledge acquired in daily clinical practice and the experience of coworkers, without an evidence-based approach. This reliance on non-standardized methods can lead to inconsistent practices and risks to patient safety. Nonetheless, roles and responsibilities among members of the surgical team often lack clear guidelines, which can compromise patient safety.[9] In light of the foregoing, this study aims to validate surgical positioning competencies with a group of expert judges in perioperative nursing through the Delphi technique.

METHODS

This study is part of the project "Construction and validation of nurses' competencies in the surgical positioning of patients: validation study", approved by the Ethics Committee of the Syrian-Lebanese Hospital, under Opinion nº 6.419.893 on October 10, 2023, and CAAE nº 74291623.5.0000.5461. In line with Resolution 466/2012 of the Brazilian National Health Council,[10] it was not necessary to obtain a Free and Informed Consent Form from the judges.

The mapping of competencies was based on a scoping review and the researcher's experience as a perioperative nurse, resulting in the development of an instrument comprising 101 nursing actions, organized into five competencies: person-centered care, interdisciplinary team, evidence-based practice, quality of care, and patient safety. These competencies were divided into three domains: knowledge, skill, and attitude.[11]

In order to validate the content, the Delphi technique was used to reach consensus among experts through successive rounds. Five Surgical Center expert judges were selected through the Lattes Platform, following the inclusion criteria: expert title in the field and at least two years of experience in a hospital setting or teaching. Nurses working in other perioperative areas were excluded.

Data were collected between March and April 2024. The selection of professionals on the Lattes Platform was based on the following keywords: surgical positioning, positioning, and operating room. Each judge received an invitation by email containing the link to the Google Forms form, where they assessed the content of the instrument using a five-point Likert scale (1 = Strongly disagree to 5 = Strongly agree), considering the criteria of relevance, pertinence, clarity, and applicability. At the end of the questionnaire, open questions were included for suggestions for improvement. The Likert scale measures the respondent's attitude through a continuous series of options, balancing positive and negative values, and the average score of the responses is calculated for analysis.[12]

The judges had seven days to complete the assessment, and periodic reminders were sent to those who did not respond within the time limit. The data were analyzed using measures of central tendency and the Content Validity Index (CVI), obtained from the ratio between the number of agreeing assessments and the total number of judges. Items that received a score of 4 (Agree) or 5 (Strongly Agree) and achieved a CVI ≥ 0.80 were considered valid.

The CVI is widely used in the health field to assess the degree of agreement among experts as to the suitability of the items in an instrument.[13] The items that did not reach the minimum CVI value were reviewed based on the judges' suggestions, and two rounds were carried out to reach the final consensus, thus concluding the validation of the second version of the instrument.

RESULTS

The five judges selected through the Lattes Platform were PhDs, working in care and teaching, with experience in the perioperative area and carried out the content validation of the first version of the instrument "Nurses' competencies in surgical positioning", within the deadline set for response.

In the first round, regarding the absolute response per item, the judges agreed with 97.03% (n=98) of the items. In 89 of the 101 items, the CVI was higher than 0.90, with only two items scoring CVI < 0.80. The total Content Validity Index (CVI) of the instrument was 0.95. However, two items obtained a CVI below 0.80 and were reviewed in terms of nomenclature for the second round, these being related to the risk scale and patient repositioning.

Only one judge suggested adjusting the nomenclature of the item to the position of the arms in a lateral position, changing the nomenclature from "buttocks to gluteus" and associating three items in the Trendelenburg position. Moreover, two judges suggested adding another competence to the same item, in four actions. With five changes to actions and four to competencies, the changes made are displayed in Chart 1.

Chart 1. Changes to the first version of the instrument after the first round of the Delphi technique. São Paulo, SP, Brazil. 2024.

Competencies and items of the instrument			
First version		Items after review	
ALL POSITIONS			
C/Q	I apply the risk assessment for positioning used by the institution.	C/Q	I apply the risk assessment for positioning used by the institution (Examples: ELPO Scale, MUNRO).
Q	I consider repositioning the patient during long procedures.	Q/P	I consider reassessing positioning during long procedures and, in the event of movement, I consider repositioning.
C	I assess and record postoperative skin integrity.	C/Q	I assess and record postoperative skin integrity.
PRONE			
Q	I make sure that the patient's eyes are free of pressure.	Q/S	I make sure that the patient's eyes are free of pressure.
LATERAL			
Q	I keep the arms abducted up to 90º.	Q	I keep the arms abducted up to 90º (Except in thoracic surgeries that require an angle greater than 90º).
LITHOTOMY			
Q	I use cushions to protect the patient's hands when moving the leg braces.	Q	I protect the hands with cushions.
Q	I keep the patient's sacrum and buttocks supported on the table.	Q	I keep the patient's sacrum and gluteus supported on the table.
TRENDELENBURG			
S	I ensure that the patient does not slip off the operating table using: a) Support surfaces (e.g., viscoelastic mattress).	S	I ensure that the patient does not slip off the operating table using: support surfaces (e.g., viscoelastic mattress), positioner (e.g., vacuum mattress) OR another positioning device for this purpose.
S	b) Vacuum mattress.		
S	c) OR another positioning device for this purpose.		
S	I acknowledge that positioning devices for shoulder support must not be used.	S/P	I acknowledge that positioning devices for shoulder support must not be used.

C/Q – Person-centered care/Quality of care; Q – Quality of care; Q/P – Quality of care/Evidence-based practice; C – Person-centered care; Q/S - Quality of care/Patient safety; S – Patient safety; S/P – Patient safety/Evidence-based practice.

Source: designed by the authors.

After the changes to the instrument were made, based on the assessment from the first round of the Delphi technique, a second version of the instrument "Nurses' competencies in surgical positioning" was sent to the judges via email.

In the second round of the Delphi technique, only three judges responded within the seven-day deadline, necessitating a second email to the missing judges, and there was no response within seven days. Consequently, a third email was sent, with responses received from the two missing judges within seven days.

Regarding the absolute response per item, there was agreement among the judges in 88.12% (n=89) of the items. The total Content Validity Index (CVI) of the instrument was 0.93. However, one item remained with a CVI below 0.80. Accordingly, considering it an important item in the care process, it was decided to keep the item in the instrument (Table 1).

There were no suggestions or comments at this stage, thus concluding the validation process with the Delphi technique.

Table 1. Content validity index obtained by judges, according to the items of the instrument, in the first and second rounds of the Delphi technique. São Paulo, SP, Brazil. 2024.

Items of the instrument with competencies	CVI_1	CVI_2
ALL POSITIONS		
[1. I acknowledge the patient's surgical position, according to the surgical procedure. (P/C)]	1	1
[2. I plan the positioning in advance. (C)]	0.88	0.92
[3. I develop a positioning care plan for each patient. (C)]	0.92	0.92
[4. I ensure the proper functioning and integrity of cushions and positioning devices. (S)]	0.96	0.88
[5. I acknowledge the positioning devices and the operating table in terms of weight capacity, size, and articulation ability necessary for safe movement. (S)]	0.92	1
[6. I understand the patient's risk factors for surgical positioning. (P/C)]	0.96	1
[7. I apply the risk assessment for positioning used by the institution. (C/Q)]	**0.76**	**0.72**
[8. I assess the patient's skin and check for areas of hyperemia, ischemia, and edema. (C/P/Q)]	0.88	1
[9. I ask the patient, when awake, if he/she experiences pain or previous numbness. (C/Q)]	0.92	0.92
[10. I know my role within the team when positioning the patient. (E)]	1	1
[11. I ensure an adequate number of professionals to position and move the patient. (I/S)]	0.92	0.88
[12. I minimize the risk of injury when transferring the patient from the operating table to the stretcher. (Q/S)]	1	0.92
[13. I identify and protect bony prominences and pressure points during positioning. (Q/P)]	1	1
[14. I keep body alignment, respecting the patient's anatomical conditions. (Q/C)]	0.96	1
[15. I use positioning devices, cushions, and safety straps correctly. (Q/S/P)]	0.96	0.92
[16. I understand the effect of normothermia. (P)]	1	0.96
[17. I monitor the position of equipment and accessories (medical devices that may be in contact with the patient). (Q)]	0.96	0.92
[18. I stabilize the patient on the operating table. (Q/S)]	0.96	0.96
[19. I review the positioning and ensure that the patient is not in contact with the metal surface of the operating table. (Q/S)]	1	0.92
[20. I make a note in the medical record, detailing the patient's complete positioning, in line with the institution's policy regarding: a) Identification of the individuals involved in the positioning. (C)]	0.92	0.92
[b) Patient position, limb position, and any repositioning activities. (C)]	0.96	0.88
[c) Type and location of safety restrictions. (C)]	0.96	0.88
[d) Specific actions to prevent injuries. (C)]	0.96	0.88
[21. I consider repositioning the patient during long procedures. (Q)]	**0.76**	0.88
[22. I assess and record postoperative skin integrity. (C)]	0.96	0.92
[23. I provide postoperative assessment information to the anesthesia care unit nurse/destination unit regarding: areas of the patient's body that must be monitored for possible injuries, events during the intraoperative period that may have contributed to a positioning injury, and patient positioning. (C)]	0.84	0.92
SUPINE POSITION		
[1. I acknowledge that all precautions for all positions and variations of the supine position must be followed. (P)]	1	1
[2. I understand the possible arm positions: a) Along the body, secured with a sheet. (P)]	0.88	0.96
[b) Along the body, in braces. (P)]	1	0.96
[c) Abducted in braces. (P)]	1	0.96
[3. When the arms are at the side of the body, secured with a sheet: a) I keep the arms in a neutral position, with the palms facing the body, without hyperextending the elbows. (Q)]	0.84	0.96
[b) I protect the hands and elbows with cushions if necessary. (Q)]	0.96	0.92
[4. When the arms are in braces: a) I keep the limb supinated, with the palm facing up. (Q)]	1	0.92
[b) I use cushions on the braces. (Q)]	0.96	0.92
[c) I keep the braces level with the height of the operating table. (Q)]	1	1
[d) I do not abduct the patient's arms more than 90º. (Q)]	1	1
[e) I secure the patient's arms to the braces with straps. (Q)]	1	0.92
[5. I keep the knees flexed using a pillow or cushion. (Q)]	1	0.96
[6. I place the safety strap approximately 5 cm above the knees. (Q/S)]	1	0.92
[7. I keep the patient's legs parallel. (Q)]	1	1
[8. I keep the heels elevated. (Q)]	1	1
PRONE POSITION		
[1. I acknowledge that all precautions for all positions and variations of the prone position must be followed. (P)]	1	0.92
[2. I position the patient's head in a neutral position. (Q)]	1	0.92
[3. I ensure the use of an appropriate face cushion. (Q/S)]	1	0.84
[4. I ensure the patient's eyes are free from pressure. (Q)]	1	0.88
[5. I monitor the patient's facial pressure points. (Q)]	1	0.88
[6. I understand the possible arm positions: a) Along the body, secured with a sheet. (P)]	0.88	0.88
[b) Along the body, in braces. (P)]	1	0.88
[c) Flexed in braces. (P)]	1	0.88
[7. When the arms are at the side of the body, secured with a sheet: a) I keep a neutral position, with the palms facing the body and without hyperextending the elbows. (Q)]	0.88	0.88
[b) I protect the hands and elbows with cushions if necessary. (Q)]	1	0.88

[8. When the arms are flexed in braces: a) I use cushions in braces. (Q)]	1	0.84
[b) I keep the braces below the patient's chest line. (Q)]	0.92	0.84
[c) I abduct the patient's arms at an angle less than 90° to the elbow line. (Q)]	0.92	0.92
[d) I keep the arms pronated, with the palms facing down. (Q)]	1	0.92
e) I secure the arms to the braces with straps.	0.92	0.92
f) I use chest and clavicular cushions.	1	1
g) I use iliac crest cushions.	1	1
[11. I keep the thorax and abdomen free of pressure for expansion and circulation. (Q)]	1	0.92
[12. I position the breasts and genitals appropriately, free of pressure. (Q)]	1	0,92
[13. I protect the knees with cushions. (Q)]	1	0,92
[14. I place pillows under the patients' legs so their toes are free from pressure. (Q)]	1	0,92
LATERAL POSITION		
[1. I acknowledge that all precautions for all positions and variations of the lateral position must be followed. (P)]	0.92	1
[2. I keep the head aligned and supported by a pillow. (Q)]	0.92	0.96
[3. I ensure that the ear resting on the pillow is not bent. (Q)]	0.92	1
[4. Regarding the arms: a) I ensure they are level and parallel with braces. (Q)]	0.92	0.96
[b) I use cushions on the braces. (Q)]	0.80	0.92
[c) I keep the arms abducted up to 90º. (Q)]	0.92	1
[d) I keep the arm below in a neutral position, with the palm facing up. (Q)]	0.92	0.96
[e) I keep the arm above, in line with the shoulder, in a neutral position, with the palm facing down. (Q)]	0.92	0.96
[f) I secure the arms to the braces with straps. (Q)]	0.92	0.92
[5. I use an axillary cushion. (Q)]	0.92	0.96
[6. I use a safety strap or safety restriction at hip height. (Q/S)]	0.92	0.92
[7. I flex the leg above and protect the knee, ankle, and foot with a cushion. (Q)]	0.92	0.96
[8. I use a pillow between the legs and keep the leg below aligned with the hip. (Q)]	0.92	0.96
LITHOTOMY POSITION		
[1. I acknowledge that all precautions for all positions and variations of the lithotomy position must be followed. (P)]	1	1
[2. I understand the possible arm positions: a) Along the body, secured with a sheet. (P)]	0.88	0.92
[b) Along the body, in braces. (P)]	1	0.92
[c) Abducted in braces. (P)]	1	0.92
[3. When the arms are at the sides of the body and secured with a sheet: a) I keep the arms in a neutral position, with the palms facing the body without hyperextending the elbows. (Q)]	0.88	0.96
[b) I use cushions to protect the patient's hands when moving the leg braces. (Q)]	1	0.96
[4. When the arms are in braces: a) I keep the limbs supinated, with the palms facing up. (Q)]	1	0.96
[b) I use cushions on the braces. (Q)]	1	0.96
[c) I keep the braces level with the height of the operating table. (Q)]	1	0.96
[d) I do not abduct the patient's arms more than 90º. (Q)]	1	1
[e) I secure the patient's arms to the braces with straps. (Q)]	1	0.96
[5. I do not use the safety strap tightly across the thorax or abdomen. (Q)]	1	0.92
[6. I keep the patient's sacrum and gluteus supported on the table. (Q)]	1	1
[7. I use boot-style leg braces that support as much of the leg as possible. (Q)]	1	1
[8. I position the legs on two people simultaneously. (Q/S)]	0.96	1
[9. I avoid excessive flexion, rotation, and abduction of the legs and hips. (Q)]	1	1
[10. I remove the legs from the leg braces on two people simultaneously. (Q/S)]	0.96	0.96
TRENDELENBURG POSITION		
[1. I acknowledge that all precautions for all positions, including the supine or lithotomy position, and variations of the Trendelenburg position, must be followed. (P)]	1	0.92
[2. I acknowledge that the Trendelenburg degree must be as small as possible. (P)]	1	0.88
[3. I acknowledge that the patient must remain in Trendelenburg for as short a time as possible. (P)]	1	0.92
[4. I acknowledge that the patient must be repositioned to the supine position at established intervals during the procedure, if possible. (P)]	1	0.84
[5. I ensure that the patient does not slip off the operating table using: a) Support surfaces (e.g., viscoelastic mattress)	1	
[b) Vacuum mattress (S)]	1	0.88
[c) OR another positioning device for this purpose. (S)]	1	
[6. I ensure the use of cushions so that the patient does not have direct contact with the vacuum mattress. (S)]	1	0.88
[7. I acknowledge that positioning devices must not be used for shoulder support. (S)]	0.92	0.8
REVERSE TRENDELENBURG POSITION		
[1. I acknowledge that all precautions for all positions, including the supine or lithotomy position, and variations of the Trendelenburg position, must be followed. (P)]	1	0,92
[2. I use a positioning device with a cushion to support the feet. (S)]	1	0,84

CVI – Content Validity Index (CVI1 – first round; CVI2 – second round). Competencies: C – Person-centered care; P – Evidence-based practice; Q – Quality of care; I – Interdisciplinary team; S – Patient safety.
Source: designed by the authors.

DISCUSSION

The validation process for this study involved five judges over two rounds, without loss of assessors, despite the need for repeated submissions. The Delphi technique was used to identify consensus among experts regarding the nursing competencies included in this instrument. This method has been consolidated as a relevant tool for building consensus in various fields of knowledge. In addition, its application has become more accessible, especially as it enables communication with geographically distant experts through digital platforms such as email addresses, which is made available on a voluntary basis.[14]

In the content validation, the Content Validity Index (CVI) reached 0.95 in the first round and 0.93 in the second round, rates comparable to those obtained in similar studies on nursing competencies.[15] Although some items, such as risk assessment and patient repositioning, presented disagreements, it was decided to keep them due to their relevance in evidence-based practices.

A scoping review on competencies concluded that the technical competence domain includes knowledge and skills for operating room nursing, while the non-technical domain includes cognitive, affective, and psychosocial skills, considering it essential to examine competencies in detail and design training programs and instruments for assessing competence.[16]

The definition corroborates the preparation of this instrument, proposing technical assessment, with knowledge, skills, and attitudes for patient safety. Although positioning is one of the many duties of perioperative nurses, it is important to exclusively assess the competencies of this activity, allowing for professional development through self-assessment.

Although health professionals work in reputable surgical centers and position patients to prevent injuries, these events occur more frequently than desired.[17]

The risk of perioperative positioning injuries is a nursing diagnosis that involves interventions such as the use of support surfaces, protection of bony prominences, and monitoring the patient position. [18-19] Risk assessment was deemed essential as a type of competence of nurses in terms of care planning, keeping this item even with CVI < 0.80.

Intraoperative repositioning, although not very common, is crucial to correct the surgical position and minimize damage to the skin and nerves during prolonged procedures. It is recommended to reposition the patient whenever there is a change in position, such as, for example, slipping, by adjusting the table or devices for body realignment.[20]

After the first round, language adjustments and specific position descriptions were incorporated to improve the clarity and appropriateness of the content. In the second round, no new modifications were necessary.

The validation indicated a high understanding of the content by the professionals, with a CVI above 0.93, confirming the content to nurses' competencies in surgical positioning. Validation by experts ensures the accuracy and reliability of the instrument, promoting qualified care and safety in the perioperative environment.[21]

The limitations of this study include the fact that the competencies were built based on the pertinent literature, which may result in variations in requirements among different institutions and care contexts. Although the content validation process involves aspects related to the development of the instrument and expert analysis and judgment, it is important to combine other validation methods. As a next step, it is suggested to carry out a psychometric validation of the instrument to assess its validity, reliability, sensitivity, and specificity.

This study contributes to the field of perioperative nursing by validating a specific instrument for assessing nurses' competencies in surgical positioning, providing a structured tool for professional self-assessment and team training. Standardizing competencies contributes to patient safety, thus preventing complications arising from inappropriate positioning and promoting quality perioperative care. In addition, the adoption of this instrument can serve as a basis for the implementation of training and institutional guidelines, thus strengthening evidence-based practice.

CONCLUSION

The content validation process by judges using the Delphi technique resulted in Content Validity Indexes (CVI) of 0.95 in the first round and 0.93 in the second round, indicating high agreement among the experts as to the suitability of the instrument. The two items that did not meet the minimum criteria for agreement were kept by the researcher, as they are considered essential for the practice of surgical

positioning, since they involve assessing the risk of injury and the need to reposition the patient during prolonged procedures or those that require movement. Accordingly, the validated instrument contributes to the standardization of perioperative nurses' competencies, thus promoting patient safety and quality of care.

CONTRIBUITIONS

Contributed to the conception or design of the study/research: Palos, LC, Sousa, CS. Contributed to data collection: Palos, LC. Contributed to the analysis and/or interpretation of data: Palos, LC, Sousa, CS. Contributed to article writing or critical review: Palos, LC, Sousa, CS. Final approval of the version to be published: Palos, LC, Sousa, CS.

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