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Positioning the surgical patient – roles, responsibilities and challenges. A qualitative study

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Abstract

Aims: The aim was to explore how representatives from the different professions in the surgical team experience roles, responsibilities and challenges in positioning the surgical patient.

Background: Appropriate patient positioning on the operating table during surgery is vital for optimal anatomical exposure, access to essential equipment, patient comfort and to minimize the risk of injuries. Patient positioning has been described as a shared responsibility of the entire surgical team. The research on roles and responsibilities in patient positioning during surgery is sparse.

Design: The study had a qualitative design, including 16 individual, semi-structured interviews, conducted in November and December 2023.

Methods: Participants included surgeons ($n=4$), anaesthetists ($n=4$), operating room nurses ($n=4$) and nurse anaesthetists ($n=4$) in a hospital in Southeastern Norway. The data were analysed using Braun and Clarke's six-step Reflexive Thematic Analysis.

Results: Three main themes with subthemes were identified, namely (1) A teamwork approach, with subthemes (a) facilitating surgery and (b) health professionals' roles and responsibilities. (2) A patient safety issue, with subthemes (a) risk patients and (b) procedural challenges. (3) Absence of a systematic approach, with subthemes (a) various approach to second time-out and (b) documentation and feedback issues.

Conclusion: Appropriate and safe positioning during surgery is a common responsibility of all members of the surgical team. Despite the common assumption that surgeons hold the primary responsibility, the operating room nurses seemed to hold the hands-on responsibility. Different health professionals emphasized different risk patients, risk procedures and perceived challenges. This suggests a connection between the specific focus of distinct professional domains, their tasks and expertise within the surgical context.

Impact: There is a lack of clear guidelines outlining roles and the distribution of responsibility in patient positioning, which may be a safety concern. A need for reviewing responsibilities and defining roles is identified.

Systematic follow-up of documentation of post-operative observation and documentation of skin status and the "second time-out" procedure is crucial to establish

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measures rooted in guidelines supported by both professional and administrative management. This dual commitment may ensure a comprehensive strategy for systematic follow-up, fostering a culture of continuous improvement.

Patient Contribution: Not applicable.

KEYWORDS
challenges, documentation and feedback systems, operating room team, patient position, responsibilities, roles

1 | INTRODUCTION AND BACKGROUND

Appropriate patient positioning on the operating table during surgery is vital for optimal anatomical exposure, access to essential equipment, patient comfort and to minimize the risk of injuries (Nilsson, 2013; Spruce & Van Wicklin, 2014). Prolonged fixed positioning during surgery increases the risk of skin, muscle and nerve damage (Bentsen et al., 2023; Kimsey, 2019). Anaesthetised patients are unable to communicate position-related discomfort or reposition themselves and face an elevated risk for harm and adverse events (Kimsey, 2019; Sørensen et al., 2016; Spruce & Van Wicklin, 2014). Patient-related factors like comorbid conditions, increased age and high body weight, as well as operation-related factors such as the physical orientation of the patient and the duration of the operation are also factors closely associated with increased risk of injuries (Buso et al., 2021; Kimsey, 2019). Additionally, the chosen surgical position can introduce risk factors that compromise the natural body position, impacting blood circulation and skin integrity (Gefen et al., 2020; Kimsey, 2019).

The World Health Organization (WHO) Surgical Safety Checklist, designed to minimize errors and adverse events, has been widely adopted (WHO, 2008). A fully performed time-out includes reviewing the patient's position to prevent skin injuries, both while and immediately after the patient's time on the operating table (WHO, 2008). Song et al. (2013) also propose a second "time-out" after approximately 3 h of surgery, to reduce positioning complications during long-lasting robotic operations.

Although procedures often require various patient positions, ensuring safe and effective patient positioning demands advanced knowledge and experience (Bjorklund-Lima et al., 2023; Sørensen et al., 2016). Moreover, evolving knowledge and advancements in equipment and technology lead to novel surgical methods necessitating updated expertise in positioning (Bjorklund-Lima et al., 2023; Gefen et al., 2020). Given the uniqueness of each patient, individualized adjustments to positioning procedures are crucial to prevent patient injury, underscoring the significance of assessment skills (Spruce & Van Wicklin, 2014).

Safe and appropriate positioning of the surgical patient has been described as a shared responsibility of the entire surgical team (Phillips & Hornacky, 2020; Speth, 2023; Welch et al., 2018). However, roles and responsibilities are closely linked to the competence required for effective planning, execution, decision-making and implementation of measures aimed at minimizing the risk of harm to the patient (Bentsen et al., 2023; Bjøro et al., 2020; Del Missier et al., 2012). Several articles have addressed various challenges and concerns regarding the positioning of patients in the operating room, particularly from the perspectives of operating room (OR) nurses and nurse anaesthetists (NAs). Although these articles emphasize the shared goal of patient safety and care, they highlight different challenges unique to each role. Studies in NAs mainly focus on which assessments should be made in relation to the patient's comorbidity and the inhibitory effect of anaesthesia on a number of the protective body mechanisms (Nilsson, 2013; O'Connor & Radcliffe, 2021). In contrast, studies involving OR nurses reveal that they perceive a greater responsibility in planning, gathering positioning equipment and positioning the patient (Blomberg et al., 2018; Brooker et al., 2020; Speth, 2023). Stone et al. (2017) described that the overall responsibility for choosing patient positioning lies with the surgeon, as the team leader. We found no studies that specifically addressed the role of anaesthesiologists in patient positioning, nor that examined the entire team's role in this area. This suggests a potential gap in research demonstrating a coherent understanding of roles and responsibilities among the diverse health professions engaged in the positioning process.

2 | THE STUDY

The roles and responsibilities of the various healthcare professions in patient positioning, lack a clear, unified understanding in the surgical team. Although the study was carried out in Norway, the study has international relevance, since this knowledge may increase team members' understanding of and commitment to their role in practical positioning.

Consequently, the overall aim of our research was to explore how representatives from the different professions in the surgical team experience roles, responsibilities and challenges in positioning the surgical patient. The research question was: How do surgical team members perceive their roles and responsibilities and what challenges do they encounter, during patient positioning for surgery?

2.1 | Method and design

The study used a qualitative approach with an explorative design, utilizing semi-structured individual interviews. This is a well- suited

method to generate knowledge from participants' experiences, perceptions and opinions, questions (Korstjens & Moser, 2017). The study adheres to the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007).

2.2 | Setting and participants

The interviews took place in a medium-sized hospital in Norway in November and December 2023. Here, the Surgical Safety Checklist includes a recommendation for a second time-out after approximately 2 h to mitigate positioning complications arising from prolonged operations. For 15–20 min, the circulating OR nurse and the NA check the patient's position, and, if possible, move the patient's arms and legs.

A purposive sampling strategy was used, focusing on including participants with rich information and recognized roles during surgical positioning. Representatives from each of the four health professions in the operating team (surgeons, anaesthetists, OR nurses and NAs) were recruited through the department heads, with the aim of including a diversity in gender, age and years of experience. The inclusion criteria required a minimum of two years of professional experience in their current profession, with employment in the surgery department at the time of the study. Two participants did not respond and were replaced. Due to delayed responses from five initially requested candidates, the request had to be repeated.

2.3 | Data collection

The researchers developed an interview guide through a synthesis of prior research (Brooker et al., 2020; Singh & Sarna, 2019; Speth, 2023; Spruce & Van Wicklin, 2014) and internal discussions (see Table 1). In addition, the interview guide was piloted in one OR nurse and one NA. No negative comments on relevance, clarity or content were given.

The interviews were distributed between the two researchers, both skilled in qualitative interviews, an associate professor and OR nurse (AW) and an NA and professor (ACLL), both females. Each interview was conducted individually, most of them face-to-face and four of them digitally and occurred mainly during participants' working hours in a separate room within the operating ward. The interviews typically spanned 25 to 45 min, with an average duration of 38 min. They were digitally recorded and transcribed verbatim within few days. The researchers documented initial impressions and thoughts after each interview in reflexivity notes which were reviewed during the analysis (Braun et al., 2022).

2.4 | Analysis

Braun and Clarke's Reflexive Thematic Analysis (RTA) was used for data analysis (Braun et al., 2022; Welsh & Lusher, 2022). RTA is particularly adept at handling nuanced, complex and conflicting data and have the potential to be an indicator or providers of key information related to the topic (Welsh & Lusher, 2022).

TABLE 1 Interview guide.

Questions	Follow ups/ prompts
How would you describe your role and responsibilities when positioning the surgical patient?	Could you provide more details/ expand on your statement?
What is your attention and focus on when positioning the surgical patient?	
Are there any specific patients/patient groups that you pay extra attention to when positioning the patient safely and well?	Why? Can you provide a description
What do you think about a second timeout procedure for prolonged surgery?	Why? Can you provide a description
Do you see/have you experienced any challenges related to it (the second timeout)?	
Imagine a patient where a lot of preparation and adjustments are required to perform positioning- Can you describe such a situation that you have experienced?	
In your opinion, who is responsible for correct positioning of the operating patient?	Please elaborate
How do you want this responsibility to be distributed?	Why?
Have you experienced situations where a patient sustained injuries due to positioning?	If so, in what way? Please tell about it
Which positions do you consider particularly challenging within your responsibilities?	Why?
Are there specific patient positions that pose significant challenges in terms of patient safety?	Why?
Do you conduct immediate post-surgical observations to identify potential pressure or postural damage?	Is any kind of scoring tool used for this
If yes, what is the documentation process for recording these observations?	
In your experience, is there enough equipment for optimal patient positioning	
Is there any additional information or insights you would like to share regarding the positioning process?	

Both researchers actively collaborated throughout the analysis process with a subjectivity to the data and the researcher role, in line with Braun and Clarke's description of RTA (Braun et al., 2022). In the initial step, both researchers independently read and re-read transcripts to familiarize with the data. In step 2, the researchers independently identified contents of interest, adding initial codes or labels that were meaningful and relevant to the study aim. These codes and labels were discussed, until consensus was reached. Step 3 entailed collaborative efforts to define preliminary themes aligned with coded excerpts, across the dataset. Then, in step 4, the researchers discussed meaningful interpretations and overarching themes across the dataset, including a consideration of the first adaptation of preliminary themes by going back to the data set, checking that the themes made sense in relation to the codes/labels and the whole data set. These themes were further discussed and refined in step 5. Table 2 gives an example of the analysis process.

2.5 | Ethical considerations

The study adhered to ethical research principles outlined in the Declaration of Helsinki ensuring anonymity, confidentiality and obtaining willing, informed, written consent to participate (Association, 2013). The study was assessed by the Norwegian Agency for Shared Services in Education and Research (no. 943871).

2.6 | Reflexivity and trustworthiness

Credibility is maintained through a systematic approach, a transparent methodology, iterative discussions among researchers, exploration of varied perspectives and a reflexive attitude. Participants were encouraged to share experiences and validate the researchers' comprehension by having their statements reflected back to them, as described by Lincoln and Guba (Lincoln & Guba, 1985).

A reflexive strategy was used throughout to maintain and reinforce the methodological rigour, necessary for reliable results (Rettke et al., 2018). The transcribed material was thoroughly reviewed for accuracy, and both researchers were actively participating in the analysis process with subjectivity and reflexivity, following Braun and Clarke's RTA (Braun et al., 2022). Reflexivity also included discussing and reviewing notes and initial impressions after interviews by both researchers during the analysis. Data analysis involved comprehensive comparison and discussion until consensus was reached.

The researchers' preconceptions have a significant influence on their perspectives, data interpretation and the entire research process. This is attempted to be mitigated through attention to one's own preconceptions, promoting self-reflexivity and encouraging self-criticism, also by assessing the researchers' impressions against the study's theme and theoretical assumptions. As such, the strength of this study is that the researchers include two different professional groups (OR and NA) (Polit et al., 2021).

3 | FINDINGS

A total of 16 interviews were performed in November and December 2023. Table 3 gives an overview of the participants' age, gender and how many years they have worked in their current profession.

Through analysis, three main themes with subthemes were identified, namely (1) A teamwork approach, with subthemes (a) facilitating surgery and (b) health professionals' roles and responsibilities. (2) A patient safety issue, with subthemes (a) risk patients and (b) procedural challenges. (3) Absence of a systematic approach, with subthemes (a) various approach to second time-out and (b) documentation and feedback issues. Only five participants reported having experienced positioning injury. These were related to nervous ulnaris and robotic surgery.

TABLE 2 Example of the analysis process.

Preliminary codes	Theme	Main theme	Quote
OR nurse takes the main responsibility, and NAs for the upper body, a shared responsibility	Shared responsibility with different health professionals	A teamwork approach	"*It is, after all, a shared responsibility. But I think that, as a surgeon, … and I would assume the responsibility if something went wrong…* "(surgeon 4)
Ensure safety for vulnerable patients Extra attention to elderly patients with additional illnesses	Taking care of the risk patients	A patient safety aspect	"*keen to avoid them getting any injuries, that there is nothing pinched, prevents pressure ulcers*" (OR nurse 2)
Redness or swelling that does not become an established injury is not always documented, we do not check systematically	Documentation	Absence of a systematic approach	"*So we don't have a systematic check of the whole body or exposed points or anything like that … we document what we discover* (NA 3)

TABLE 3 Characteristics of the participants ($N = 16$).

Profession	Age-range in years	Female, $n = 9$	Male, $n = 7$	Experience-range, in years
OR nurses ($n = 4$)	36–43	3	1	3–18
NAs ($n = 4$)	41–50	2	2	8–22
Anaesthetists ($n = 4$)	32–50	2	2	3–21
Surgeons ($n = 4$)	35–50	2	2	8–20

Abbreviations: NA, nurse anaesthetist; OR, operating room.

Illustrative quotes are presented with reference to participants; OR nurse, NA, Anaesthetist and Surgeon, numbered 1–4.

3.1 | A teamwork approach

Across professions, participants agreed that positioning the patient was the responsibility of the entire surgical team. However, there were discrepancies regarding who was considered primarily responsible for ensuring correct positioning. All participants agreed that the OR nurses were the primary practitioners of positioning. Also, all participants tended to divide the patient into two halves regarding responsibility for positioning.

3.1.1 | Facilitating surgery

All participants agreed that positioning was important mainly to facilitate for surgery, and the surgeon had the primary responsibility, overseeing the entire perioperative pathway. In some procedures, for example when the surgeons needed access from two sides, the surgeons actively participated in positioning, whereas in other instances, they were absent during this phase. One OR nurse noted:

> *"We have a lot of responsibility for positioning the patient, it's in our curriculum. But the surgeon has the main responsibility, and place this on us"*
>
> (OR Nurse 1)

One of the anaesthetists also underlined this contrast:

> *"The surgeon has the main responsibility, but contributes to a varying extent"*
>
> (Anaesthetist 3)

However, another anaesthetist (Anaesthetist 1) underlined that if something went wrong, the anaesthetists were the ones blamed. The NAs, on the other hand, perceived that the OR nurses held the responsibility. One of them said:

> *"The operating room nurses have the knowledge, and hereby also the responsibility for correct positioning"*
>
> (NA 2)

3.1.2 | Health professionals' roles and responsibilities

Even though most participants perceived the surgeon as primarily responsible for correct positioning, there was unanimous agreement that it was the OR nurses who carried out the practical positioning. OR nurse 1 stated that *"operating room nurses focus on preventing injuries due to pressure, proper access, and a comfortable position to the patient"*.

The active role of OR nurses in patient positioning was closely linked to their responsibility for equipment and ensuring correct positioning. All participants agreed that the OR nurses ensured the availability of proper positioning equipment in the OR, as stated by OR nurse 2: *"We facilitate and get all the necessary equipment and ensure that it is used correctly"*.

Both NAs and anaesthetists reported that they often contributed to positioning the patient. However, they often asked the OR nurse to control whether the position was correct exemplified. NA 4 expressed: *"to control what I've done"*. Additionally, NAs, anaesthetists and OR nurses stated that they *"divide the patient into two halves"*, where the anaesthetic personnel positioned patients' head and arms, whereas the OR nurses positioned the rest of the patient. Anaesthetist 3 stated *"I'll assist and help during positioning. But I have to ask the operating room nurse to check if it is correctly done"*.

To all the OR nurses, this was a natural task, *"since we are most updated in the surgical procedure"* (OR nurse 4), they reported that they always checked the arms one extra time.

3.2 | A patient safety aspect

All participants underlined that correct positioning was a patient safety aspect and a very important focus during surgery. However, the participants had different views of which patients and procedures that constituted an increased risk for injuries.

3.2.1 | Risk patients

All the participants agreed that older patients and obese patients constituted an increased risk for positioning injuries, and hereby demanded increased awareness during positioning. Moreover, OR

nurses and NAs identified risk factors such as "*frail patients*", "*obese patients*", and "*tall patients*". For example, OR nurse 3 said: "*I am extra aware when patients are heavy…frail, elderly, and obese patients who needs to have their legs in leg-holders*".

The NAs and anaesthetists also specified the risk patients further. For example, NA 3 described high-risk patients as "*patients in general anesthesia, and with an extremity nerve block*". One of the anaesthetists emphasized "*a need to focus on positioning in patients with neck injuries- to avoid pressure on the nerves*" (Anaesthetist 2). Also, one of the surgeons expressed: "*It's a great difference between healthy and ill patients, for example patients with multiple sclerosis*" (Surgeon 4).

3.2.2 | Procedural challenges

Most of the participants highlighted specific procedures that posed challenges in terms of positioning, but the mentioned procedures varied greatly. One of the anaesthetists emphasized that "*back-patients is pointed out by all anesthetists*" (Anaesthetist 4). Another anaesthetists identified more procedures like "*shoulder arthroscopy positioned on the side with hanging arm*" (Anaesthetist 1). Anaesthetist 3 stated that "*some procedures imply increased focus both related to surgeon's awareness and equipment. It's a difference between back surgery and thermal injuries*, which requires a simple supine position".

NAs did not focus on specific challenging procedures. However, all participants stressed that positioning that necessitated additional equipment and patient movement during the operation, posed challenges. The latter was supported by two of the surgeons underlining that re-positioning during surgery was challenging. The OR nurses reported that the most challenging positions was prone positions, side-positions in vacuum pillows and robotic-assisted laparoscopic prostatectomy.

3.3 | Absence of a systematic approach

All participants reported that the follow-up of positioning perioperatively was non-systematic. Perioperatively, this was related to the "second time-out" procedure. Postoperative this was related to observation and documentation of skin status.

3.3.1 | Various approach to second time-out

Second time-out had been introduced in the OR ward as an intervention to reduce positioning injuries in long-lasting procedures (>2 h). This implied moving patients' legs and arms after 2 h surgery. Three OR nurses reported that some surgeons were not very happy for this time-out, since "the time-out delays the surgery" (OR nurse 1), "the surgeon wants to keep on with the surgery" (OR nurse 3) or "the surgeon says that it's not a good time right now…" (OR nurse 4).

Also, one of the anaesthetists stated that "*sometimes, we have to be very clear with the surgeon…*"(anaesthetist 1).

On the other hand, all NAs reported positive experiences with this intervention. NA 3 stated "*…mostly, we're able to perform the time-out. It's a great understanding in all professions that it has to be done*". One of the surgeons also underlined that "*…time-out is an advantage, and provides the whole team to take a break*" (Surgeon 4).

3.3.2 | Documentation and feedback issues

Participants unanimously agreed on the lack of systematic observation, documentation or follow-up regarding potential positioning injuries. None of them had received feedback on patient status, but that they in some cases had chosen to seek such information themselves.

All the OR nurses reported that they had to document the assessment of skin status and confirmed that they always did. However, this was not necessarily related to exposed pressure points. OR nurse 3 stated: "*…postoperative observations include assessing for redness. I'm not sure about the systematics in this…and the only documentation is when injuries occur*".

One of the NAs said: "*…the operating room nurses are good in postoperative observations, but not everything is registered if the patient is not turned*" (NA 1). NA 2 supported this, prompting "*…I think the operating room nurses describe their observations postoperatively, and that its' being reported*".

All NAs, anaesthetists and surgeons expressed uncertainty about whether the observations and documentation were routinely carried out, and by whom. Surgeon 1 said: "*I guess the nurse in the postoperative anesthesia care unit documents any discomfort or injuries?*", in contrast, surgeon 2 reported that "*I observe the whole patient and would have identified any injuries if present*".

4 | DISCUSSION

This study highlights perceived responsibilities, roles and challenges in positioning surgical patients across four professions within the surgical domain. As far as we know, the study stands out as the first exploration of perspectives from all OR team members regarding these issues. Minimal differences were identified among the groups: All participants agreed that positioning was a common responsibility and that the OR nurses took the overall responsibility for equipment and practical positioning. The participants reported of risk patients and risk procedures, however these varied between professions. The results indicate a lack of systematic approach to follow-up and documentation related to potential or established positioning injuries.

All the participants described teamwork as the intended approach to patient positioning, to facilitate surgery and avoid patient injuries. This is also underlined in previous studies focusing on surgical positioning (Babiker et al., 2014; Brooker et al., 2020; MacDonald & Washington, 2012). Working cohesively as a unit

not only streamlines tasks but also reduces the risk of perioperative complications, leveraging the strengths of each team member (Babiker et al., 2014; MacDonald & Washington, 2012; Speth, 2023). However, our study indicates that the OR nurses took a larger responsibility for performing the positioning, both taking responsibility for equipment and for controlling the whole patient. These findings adhere with those of Brooker et al. (2020) and Blomberg et al. (2018) and are likely attributed to OR nurses' intimate knowledge of surgical procedures, exposure requirements and surgeon preferences.

Many of the participants in our study stated that the main goal of positioning is to achieve optimal surgical access. However, as stated in previous studies, several considerations must be considered, including safety and the prevention of patient injuries, maintaining good working conditions and strategically positioning the necessary medical technical equipment (Bentsen et al., 2023; Kimsey, 2019; Nilsson, 2013). Our study revealed that each of the four professions within the team had an eye for various important details according to their professional background. This underscores the nuanced perspectives that each professional group contributes to the collective understanding and execution of tasks. The anaesthesia staff demonstrated a focus on critical aspects to their domain, such as the patient's head and upper arms, vital signs and ensuring the secure administration of anaesthesia. In contrast, OR nurses had a more multifaceted role emphasizing the importance of proper and secure equipment, patient care, optimal body positioning and injury prevention. Interestingly, the roles assumed by anaesthesia staff and OR nurses may appear to be not only central but also inherently complementary. Even with team members handling slightly distinct tasks, previous studies fundamentally agree that patient positioning is an interdependent effort, crucial for achieving positive patient outcomes (Babiker et al., 2014; Brooker et al., 2020; Speth, 2023).

All participants unanimously pointed to the surgeon as primarily responsible for positioning, aligning with findings from previous studies (Spruce & Van Wicklin, 2014; Stone et al., 2017). However, the surgeons themselves acknowledged that, although they have the main responsibility, a significant part of the positioning task is delegated. Conforming statements from both anaesthesia staff and OR nurses showed considerable variation in the surgeon's contribution. This variance was observed across different operating departments, different surgical specialties and even among individual surgeons. Variations in task prioritization among surgeons may explain the observed differences. Competing priorities and simultaneous task conflicts can further contribute to this fluctuation. In addition, the organization of these tasks within surgical management may appear to lack a specified time frame, which was confirmed by one of the surgeons. However, when faced with particularly challenging positioning scenarios, the surgeons often chose to prioritize their direct involvement in the positioning process. They acknowledged that they were, after all, primarily responsible for the positioning. This is in line with Spruce and Van Wicklin (2014) and Stone et al. (2017) who emphasize that the surgeon is primarily responsible.

All participants emphasized the risks involved in positioning, and the surgical team's duty to strategize and execute interventions aimed at minimizing or averting complications. This aligns with existing guidelines and research (AORN, 2021; Salazar Maya & Osorio Galeano, 2023; Sørensen et al., 2016). To accomplish this, a comprehensive understanding of the risk factors associated with the specific position, along with the associated physical challenges, patient's age, health status and the duration of the surgical intervention is imperative (Blomberg et al., 2018; Salazar Maya & Osorio Galeano, 2023). This requires advanced knowledge and experience, but also vigilance and commitment (Bjorklund-Lima et al., 2023; Blomberg et al., 2018; Sørensen et al., 2016).

Elderly, obese and frail patients were universally perceived as highly susceptible to injuries, garnering extra attention. This is supported by previous studies (Kimsey, 2019; Lopes et al., 2016). Furthermore, the identification of high-risk patients and associated factors extended to specific professional domains, tasks and competencies. This underscores the value of engaging the entire team in patient positioning, fostering communication of diverse perspectives. Through this collaborative approach, effective solutions can be devised to ensure not only patient safety and comfort but also optimal surgical access and satisfactory working conditions for all involved. Consistent with previous studies (Babiker et al., 2014; MacDonald & Washington, 2012), our participants showed a collective commitment to injury prevention, especially among nurses. Nevertheless, everyone was aware of concrete cases of workplace injuries within their department. Despite this, only a small number of them had themselves experienced such injuries.

The study identifies a lack of systematic follow-up in the positioning process, both pre- and post-operatively. Although OR nurses and one surgeon reported routine post-operative observations of skin status during patient transfers, this practice lacked consistency. The absence of systematic control immediately postoperatively makes it challenging to assess strengths and vulnerabilities in current positioning procedures. Focusing on targeted promotion of patient safety and continuous quality assurance in positioning procedures is essential for perioperative safety (Salazar Maya & Osorio Galeano, 2023; Smith & Brooks, 2012). Also, implementing appropriate perioperative position actions across all surgical phases can enhance safety in the perioperative area (Salazar Maya & Osorio Galeano, 2023).

This study also reveals shortcomings in systematic documentation. While OR nurses record patient positions and postoperative skin status, documentation often covers only notable findings and injuries, highlighting a need for more comprehensive practices. Effective nursing documentation is a vital component for ensuring patient safety and delivering high-quality care (ANA, 2010; Salazar Maya & Osorio Galeano, 2023; Spruce & Van Wicklin, 2014). To ensure successful documentation, heightened awareness of its significance and increased efforts from individual professionals are imperative (ANA, 2010). Proper documentation not only informs other healthcare professionals but also serves as a written record of actions taken, contributing to showcasing nursing's impact on patient care outcomes and treatment (Bjerkan et al., 2021; Cifra et al., 2021).

Notably, none of the participants had received feedback about patient injuries, indicating a gap in the feedback system. This is supported in a previous study, showing that participants recognize the importance of feedback loops, to consistently evaluate and improve practices (Cifra et al., 2021). Accurate clinical information is vital for patient safety, quality improvement initiatives, research and legal purposes (Bjerkan et al., 2021).

5 | STRENGTHS AND LIMITATIONS

The strength of this study is that all surgical team professions were equally represented and contributed with rich data. Similarities within and across groups also strengthen the dependability of the results.

Conducting individual interviews was a deliberate choice, acknowledging that different professions within the surgical team may have different perspectives and experiences that could lead to hesitancy in expressing candid and personal opinions on the subject in a group (Polit et al., 2021). However, we acknowledge the potential loss of knowledge production stemming from group dynamics and the interactions among participants. Conversely, this approach might have impeded certain reserved participants from articulating their perspectives and, in turn, limited the representation of viewpoints across various health professions within the team.

The interview guide underwent a pilot phase with input from both an OR nurse and a NA. Their feedback confirmed that the questions were well-considered and clearly formulated, ensuring a consistent and equitable interview experience for all participants. The researchers represent two different professions: OR nurse and NA. It would have been a strength to include a surgeon and an anaesthetist throughout the planning, pilot and conduction of the study, as well as the analysis. However, this was not done.

A strict and transparent methodology, combined with open discussions and a reflexive approach, contributes to maintaining credibility (Rettke et al., 2018). However, participant review of transcripts was absent, potentially limiting the validity of findings.

A limitation is that the result from this study is not generalizable, due to the limitations within qualitative research and that the study was conducted in a Norwegian context. However, our results align with international studies, supporting broader relevance and applicability.

Another limitation is the inclusion of participants from the same workplace, potentially limiting diverse perspectives. However, the study took place in a large hospital, involving participants from different surgical departments and professional groups.

6 | CONCLUSION

Appropriate and safe positioning during surgery is a shared responsibility of all members of the surgical team, although surgeons are believed to hold the primary responsibility. OR nurses take a greater performing part of patient positioning. Different health professionals emphasize different risk patients, risk procedures and perceived challenges. This suggests a connection between the specific focus of distinct professional domains and their tasks and expertise within the surgical context.

The results from this study indicate a deficiency in systematic documentation and feedback systems, both crucial for effectively tracking injuries and deriving insights from errors.

6.1 | Clinical implications and further research

The study underscores the significance of integrating detailed descriptions of the roles and responsibilities of various health professionals within the team when positioning the patient.

It also highlights the need to identify specific risk factors and challenges faced by different health professionals, emphasizing the importance of a collaborative team approach. Strengthening existing policies, guidelines and procedures is important to ensure that all team members understand their roles and collaborate effectively to reduce the risk of adverse events and improve surgical outcomes. Furthermore, assessing the strengths and weaknesses of current positioning procedures can enhance systematic documentation and feedback systems and ultimately advance patient safety.

The findings provide a basis for dealing with these challenges in the future. There is a clear need for further research into the roles and responsibilities for patient positioning particularly focusing on how different team members recognize and prioritize different challenges in this process.

AUTHOR CONTRIBUTIONS

Methodology: Both authors determined and developed the method; Performed experiment/data collection: Both authors; Data analysis and interpretation: Both authors; Primary author (wrote most of the paper or drafted the paper): Both authors actively contributed to the article's content, with a slightly greater emphasis on contributions from the first author; Provided revision to scientific content of manuscript: Most Ann-Chatrin Linqvist Leonardsen; Provided stylistic/grammatical revisions to manuscript: Both authors.

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The authors have no conflict of interest to declare.

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DATA AVAILABILITY STATEMENT

Data openly available in a public repository that issues datasets with DOIs.

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