Patient participation in surgical wound care in acute care settings: An integrative review

Kita Liosatos, Georgia Tobiano, Brigid M. Gillespie

PII: S0020-7489(24)00151-2
DOI: https://doi.org/10.1016/j.ijnurstu.2024.104839
Reference: NS 104839

To appear in:

Received date: 5 February 2024
Revised date: 2 June 2024
Accepted date: 3 June 2024

Please cite this article as: K. Liosatos, G. Tobiano and B.M. Gillespie, Patient participation in surgical wound care in acute care settings: An integrative review, (2024), https://doi.org/10.1016/j.ijnurstu.2024.104839

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

© 2024 Published by Elsevier Ltd.
Patient Participation in Surgical Wound Care: An Integrative Review

Title

Patient participation in surgical wound care in acute care settings: an integrative review.

Authors

Kita Liosatos¹, Georgia Tobiano²,³, Brigid M. Gillespie¹,²,³

Affiliations

¹ School of Nursing and Midwifery, Griffith Health, Gold Coast Campus, Queensland 4222, Australia
² NHMRC Centre for Research Excellence in Wiser Wound Care, Menzies Health Institute Queensland, Griffith University, Gold Coast Campus, QLD 4222, Australia
³ Gold Coast Hospital and Health Service, Queensland, 4215, Australia

Corresponding author:

¹Kita Liosatos, School of Nursing and Midwifery, Griffith Health, Logan Campus, Queensland 4131, Australia

ORCID #:

BMG: 0000-0003-3186-5691
GT: 0000-0001-5437-0777
KL: 0009-0004-9837-1156
Patient Participation in Surgical Wound Care: An Integrative Review

Abstract

**Background:** Surgical site infections can significantly impact postoperative recovery. Patient participation, which involves patients actively engaging in wound care, has been linked to improved healing and reduced wound complications. However, there is limited synthesis of the literature that explores the patient’s role and participation in the context of surgical wound care.

**Objective:** To explore patients’ perceptions of how they participate in surgical wound care, within 30 days post-operation.

**Design:** An integrative review guided by Whittemore and Knafl’s methodology. This review was registered with PROSPERO (CRD42022363669).

**Data Sources:** Searches were conducted in Medline (Ovid), CINAHL (Complete), and EMBASE (Elsevier) databases in October 2023, supplemented by forward and backward citation searching.

**Review Methods:** Based on a priori eligibility criteria, two authors independently screened articles to select relevant studies. The quality of the included research articles was critically appraised using the Mixed Methods Appraisal Tool. A descriptive and thematic synthesis was used to synthesise the findings.

**Results:** Of the 4,350 records screened for titles and abstracts, 25 studies using qualitative, quantitative, and mixed-methods designs were included. Three key themes were identified. In theme 1, ‘I am healing: how my wound shapes me and my journey,’ physical symptoms, psychological factors and previous experiences significantly influenced patients’ engagement in wound care. Theme 2, ‘Taking charge of my healing: my active engagement in wound care,’ described how patient participation in surgical wound care goes beyond clinical procedures and can include the use of technology and holistic self-care. Finally, theme 3, ‘Navigating the path to recovery: How others shape my experience’ showed that effective communication is crucial for promoting participation, yet issues like inadequate information can leave patients unprepared for wound management.

**Conclusions:** This review highlights opportunities to personalise and prioritise a patient-oriented approach to surgical wound care. Clinicians and educators should adopt an individualised approach by tailoring patient participation based on patient factors (i.e. physical symptoms) and adopt patient-centred communication approaches. Researchers should focus on exploring approaches to self-care and technology, as these approaches may enhance patient participation in wound care.

**Keywords:** Communication; patient-centred care; patient-oriented care; patient engagement; patient participation; review; surgical site infections; surgical wound care; wound technology; wounds and injuries.
What is already known:
- Patient participation in surgical wound care may enhance postoperative recovery and decrease patient risk of developing surgical site infections.
- Surgical site infections impose a significant burden and may result in hospital readmissions, higher mortality rates, reduced quality of life, and increased healthcare costs.
- Prior reviews have examined patient participation in surgical wound care in the context of discharge education, with a limited focus on surgical wound care.

What this paper adds:
- Patients' motivation and prior knowledge affect their involvement in wound care.
- Patients actively participate in a wide range of wound care activities, including self-care, communication, and technology use.
- Effective communication is critical for patient participation, but issues like insufficient information provision remain.
Background

The number of surgical procedures conducted around the world has increased, reaching over 313 million annually (Meara et al., 2015). Surgical wounds, as a common outcome of surgical procedures, are often vulnerable to the risk of infection. This risk is highlighted in a recent systematic review and meta-analysis, which found that approximately 11% of general surgical patients worldwide experience surgical site infections (Gillespie et al., 2021). These infections give rise to a myriad of adverse consequences, including hospital readmissions, elevated mortality rates, diminished quality of life, and psychosocial challenges (Andersson et al., 2010; McCaughan et al., 2018). The economic impact of surgical site infections is significant, with the Australian healthcare system spending $323.5 million on acute cases annually (Royle et al., 2023). This substantial financial burden not only affects healthcare budgets but also extends to the broader economy due to indirect costs associated with absenteeism and premature death, amounting to millions annually (Royle et al., 2023). These figures likely underestimate the true economic toll of wound infections, underscoring the need for comprehensive prevention strategies.

Researchers suggest that involving patients in their acute postoperative wound care, particularly within the first 30 days postoperatively, can have a positive effect on enhancing surgical wound recovery and minimising the incidence of surgical site infections (Kang et al., 2019, 2018; Tartari et al., 2017; Tobiano et al., 2015). The 30-day timeframe aligns with the Centers for Disease Control and Prevention (CDC) guidelines for postoperative surveillance, which focuses on monitoring wound recovery within this critical period (CDC, 2024). During this time, patients receive postoperative care, wound assessments, and follow-up appointments to prevent complications like surgical site infections and promote optimal healing. Patient participation in wound care during this period can include various activities, such as monitoring the wound for signs of infection, adhering to prescribed wound care instructions, and promptly seeking medical attention if any issues arise (Loney and Milne, 2023). Studies have shown that involving patients in these aspects of their care can raise the standard of healthcare services, and enhance patient safety and quality of life (Kitson et al., 2013; Loney and Milne, 2023). Conversely, studies on discharge education have found that inadequate patient involvement can lead to a more passive role in home wound care, resulting in increased morbidity, mortality, and healthcare expenditures (Gillespie et al., 2019; Yao et al., 2021). Despite the global imperative to enable patient participation in hospital-based care, it remains a challenge to enact among various patient populations (Jerofke-Owen et al., 2022; Kitson et al., 2013).

In healthcare, patient participation is a cornerstone of person-centred care (Kitson et al., 2013), which prioritises empowering individuals to actively engage with their health needs and expectations (World Health Organization, 2018; Wounds International, 2016). Terms such as 'patient empowerment,' 'patient involvement,' 'patient engagement,' and 'patient activation' are often used interchangeably to describe the active role of patients in the context of person-centred care (Jerofke-Owen et al., 2022; Longtin et al., 2010; Wounds International, 2016).
Defining patient participation is challenging, but it generally involves a mutual partnership between the patient and healthcare professional, with patients engaging in a spectrum of direct care activities (Jerofke-Owen et al., 2022).

Previous Reviews

No previous reviews have specifically addressed patient participation in surgical wound care. However, some reviews have explored patient education to support home wound care management and decrease infection rates, a topic closely linked to patient participation in surgical wound care (Hammoud et al., 2020; Kang et al., 2018). These reviews indicated healthcare workers’ preference for patients’ active involvement in hospital-based education but tended to focus on activities that healthcare workers controlled, rather than activities that encouraged active participation in care (Hammoud et al., 2020).

Existing primary research concerning patient participation in surgical wound care has predominantly emphasised the perspectives of healthcare workers and their role in wound care (Gillespie et al., 2020, 2019). This pronounced focus neglects a critical aspect: the tangible impact of surgical wound complications on patients post-discharge. This disconnect becomes evident when considering that healthcare workers are not the ones directly affected by such complications after patients are discharged (Tanner et al., 2012). Instead, it is the patients who bear significant disruptions following complications, including prolonged pain, compromised physical mobility, heightened psychological distress, extended recovery periods, additional medical interventions, and interference with daily activities and responsibilities (Sanger et al., 2014). Despite the gravity of these concerns, earlier research on increasing patient participation has predominantly focused on healthcare professionals, inadvertently overlooking the profound influence patients have in mitigating surgical wound complications after discharge (Sanger et al., 2014; Sutherland and Levesque, 2019). To bridge this gap, an integrative review is needed to comprehensively describe patient perspectives of postoperative wound care.

There is an emerging body of new research on patient participation in postoperative care, making a comprehensive synthesis of these studies crucial. This would provide a contemporary overview that reflects the depth and scope of patients’ involvement and their preferences in wound care. Thus, this review explores patients’ perspectives of their participation in postoperative wound care within 30 days post-operation. These review findings will contribute to a more nuanced understanding of patient participation and may be used to inform the development of strategies to increase patient participation in this context.
Methods

Design:

An integrative review was undertaken using the methodology developed by Whittemore and Knafl (2005), which involves five stages: (1) problem identification, (2) literature search, (3) data evaluation, (4) data analysis, and (5) presentation of findings. Integrative reviews are valuable for synthesising diverse sources of information, including qualitative and quantitative data, to provide a comprehensive understanding of complex topics (Whittemore and Knafl, 2005). To guide the reporting of this review, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was used (Page et al., 2021). This review was registered with the International Prospective Register of Systematic Reviews (PROSPERO) (CRD42022363669).

Problem Identification

The integrative review process began with defining concepts, the target population, and the healthcare problem using the SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type) framework. This approach, which encompasses qualitative, quantitative, and mixed methods research, was chosen to frame our research question as it aligns with the focus of our review (Cooke et al., 2012). This review focused on adult surgical patients’ (S) perceptions of their participation in surgical wound care (PI, E) within a 30-day postoperative period (E), across all types of studies (D, R). Understanding patient perceptions and experiences of surgical wound care is crucial for developing patient-centred care approaches like improving participation (Tringale et al., 2022). This focus aligns with the broader concept of acceptability in healthcare interventions, where incorporating patient perspectives leads to more effective outcomes (Sekhon et al., 2017). By limiting the timeframe to 30 days, we can capture patients' experiences and challenges during the critical early stages of wound healing. Table 1 summarises the inclusion and exclusion criteria based on the SPIDER framework.

The aim of this review is to explore patients’ perceptions of how they participate in surgical wound care, within 30 days post operation.

Literature Search

MEDLINE (Ovid), CINAHL (Complete), and EMBASE (Elsevier) databases were searched in October 2023. The SPIDER framework served as the foundation for the search strategy and included subject headings and key terms tailored to the specifics of each database; a research librarian assisted with the development of the search strategy. Appendix A displays all three search strategies.

Manual forward and backward citation searches were conducted to
locate publications that might be missed through keyword searches alone (Hu et al., 2011). "Forward" searches refer to studies that cited the included studies, while "backward" searches refer to references cited within the included studies. Automated tools including CitationChaser (Haddaway et al., 2022) and Paperfetcher (Pallath and Zhang, 2022) were used to aid citation searches; these tools significantly reduced time searching and provided an exhaustive list of studies for cross-checking (Pallath and Zhang, 2022).

**Table 1 Inclusion and Exclusion Criteria**

<table>
<thead>
<tr>
<th>SPIDER</th>
<th>INCLUSION</th>
<th>EXCLUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>S*</td>
<td>Adult (16 years+) patients undergoing any type of in-hospital open or laparoscopic surgical procedure</td>
<td>Procedures not classed as surgery i.e., endoscopic procedures. - Bariatric surgery</td>
</tr>
<tr>
<td>P*</td>
<td>Patient participation in surgical wound care</td>
<td>Community-based wound care</td>
</tr>
<tr>
<td>D*</td>
<td>Peer-reviewed primary studies</td>
<td>Unpublished studies, ‘grey’ literature, retrospective studies, dissertations or theses, editorial articles, blogs, reviews, and quality improvement articles</td>
</tr>
<tr>
<td>E*</td>
<td>Patient perceptions of their participation in their surgical wound care, and/or barriers or facilitators to patient participation. - Perceptions during hospitalisation, 30 days post-discharge, and readmission within 30 days post-hospital discharge</td>
<td>Healthcare worker perspectives. Studies were included if patient data could be extracted - Primary family/carer perspectives. Studies were included if patient data could be extracted</td>
</tr>
<tr>
<td>R*</td>
<td>Qualitative, quantitative, mixed methods - English language studies after 2010</td>
<td></td>
</tr>
</tbody>
</table>


The rationale for inclusion criteria were as follows. A seminal article on patient participation (Longtin et al., 2010) called for more research on implementing patient participation in clinical practice, thus, studies published between 2010 and 2023 were included. Studies in languages other than English were excluded as we did not have the resources to translate studies. Studies that included both surgical patients and other patient populations were excluded if specific data about surgical patients could not be extracted, as this was the focus of the review.
Covidence (Veritas Health Innovation, 2023) was used for screening and removing duplicates. Two reviewers assessed titles and abstracts against inclusion/exclusion criteria. Full-text retrieval followed, with eligibility assessed by two reviewers. Disagreements were resolved through consensus; a third-person arbiter was used if needed.

**Data Evaluation**

In this stage, relevant findings were extracted from each study into a Microsoft Excel spreadsheet, using a table developed by the review team. This data extraction table was piloted by the first reviewer using four included studies, before extracting the rest of all studies. Data extracted included the aim, design, setting, sample characteristics, data collection and findings. Data was verified for accuracy and completeness by a second reviewer chosen based on their experience in qualitative, quantitative, or mixed-methods studies. Regular meetings were held to discuss discrepancies in data entry, and disagreements were resolved through discussion, with a third reviewer available to arbitrate (Oermann and Knafl, 2021).

The quality of individual studies was evaluated, as seen in Appendix B, using the Mixed Methods Appraisal Tool (MMAT) version 2018, which allows quality appraisal of different study designs (Hong et al., 2018a, 2018b). Two independent reviewers conducted a critical appraisal using the MMAT criteria based on the chosen category (qualitative, quantitative, or mixed methods). Response options included 'yes,' 'no,' and 'can't tell,' the latter indicated insufficient information reported. Reviewers who were co-authors of included studies were assigned separate studies to prevent conflicts of interest, and another reviewer assessed one study authored by the two senior authors on the team.

**Data Analysis**

A thematic synthesis was used, which involved a three-step process to derive descriptive and analytical themes from published data (Thomas and Harden, 2008). The first step was open coding of text, wherein sentences or phrases were coded, to ensure both meaning and contextual comprehension. This coding process included patient perception data from study findings and discussions, including appendices (Thomas and Harden, 2008). To incorporate quantitative data into our thematic synthesis, we used a data-based convergent qualitative synthesis design (Pluye and Hong, 2014) which allowed us to transform numerical data into descriptive language for synthesis before coding.

The second step involved categorising codes into categories and then descriptive themes. Similar codes were grouped, forming a thematic map of categories, which were further consolidated into descriptive themes (Thomas and Harden, 2008).

In the third step, an analytical approach was employed to re-interpret
and extract new insights from the data. By refining descriptive themes and categories in a rigorous, inductive process, coherent narratives were uncovered. This enabled a deeper exploration of patient experiences, with in vivo patient quotes selected within these themes to embody their essence. This iterative and analytical method continued until the emerging themes adequately addressed research questions and revealed valuable insights that went beyond the original descriptive themes. NVivo software was used to manage the thematic synthesis phase (QSR International).

**Presentation of Findings**

In this final stage, the included studies were summarised and presented in tabular form, with key characteristics outlined in Table 2 and detailed data extractions in Table 3. The findings from the thematic synthesis were presented as themes. Furthermore, comprehensive descriptions were presented for each category.

**Rigour**

This review followed Whittemore’s (2007) guidance for rigour for secondary research. To enhance the understanding of participant data and reduce potential reviewer bias, regular team meetings were convened to discuss identified findings. Comprehensive evaluations were conducted on each study to assess bias, limitations, relevance to the review questions, and methodological coherence, further strengthening the credibility of the synthesised data. More than one reviewer was engaged in the screening process, data extraction, and quality appraisal, thus ensuring accuracy and consistency in the findings. Version controls and detailed audit trails were maintained to reinforce method reliability. In line with Whittemore’s (2007) focus on transferability, all data extraction tables were presented with context, enabling readers to assess the applicability of the findings across diverse clinical settings. Finally, data accuracy was supported by implementing a comprehensive systematic search strategy and meticulously documenting search decisions. Quality checks were systematically carried out at each stage to ensure the enduring consistency and quality of the integrative review (Oermann and Knafl, 2021).

**Results**

A PRISMA-adapted flow diagram (Figure 1) illustrates the search, screening, and selection processes for eligible studies (Page et al., 2021). In total, 4,701 studies from three databases, as well as forward and backward citation searching, were identified in the October 2023 search. Of these, 2,494 were screened, and twenty-five studies were included in the review after full-text screening.
A third of the included studies were from the United States of America. Across all of the studies, 14 were qualitative (Abbotts, 2010; Adugbire and Aziato, 2018; Berg et al., 2013; Brajcich et al., 2021; Bryson et al., 2014; Jonsson et al., 2011; Kelly et al., 2016; McMullan et al., 2019; Monsen et al., 2016; Norlyk and Harder, 2011; Saunders et al., 2022, 2021; Sreedharan et al., 2022; Thorup et al., 2018), and of the quantitative studies, eight were descriptive (Alkuwaisi et al., 2023; Du et al., 2021; Exner et al., 2020; Hunt, 2016; Lindsay et al., 2020; Roe et al., 2022; Tobiano et al., 2023; Wiseman et al., 2015). Sample sizes ranged from five (Sreedharan et al., 2022) to 321 participants (Exner et al., 2020). Interviews were the most common method to gather data, followed by surveys. These results appear in Tables 2 and 3.
Table 2: Summary of characteristics of included studies (N=25)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continent of Origin</td>
<td></td>
</tr>
<tr>
<td>Europe (Denmark, Germany, Italy, Sweden, UK)</td>
<td>11 (44.0)</td>
</tr>
<tr>
<td>North America (USA, Canada)</td>
<td>9 (36.0)</td>
</tr>
<tr>
<td>Oceania (Australia)</td>
<td>3 (12.0)</td>
</tr>
<tr>
<td>Africa (Ghana)</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Asia (Saudi Arabia)</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Study Type</td>
<td></td>
</tr>
<tr>
<td>Qualitative</td>
<td>14 (56.0)</td>
</tr>
<tr>
<td>Quantitative descriptive</td>
<td>8 (32.0)</td>
</tr>
<tr>
<td>Randomised controlled trial</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Quantitative non-randomised</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Mixed-methods study</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Setting</td>
<td></td>
</tr>
<tr>
<td>Tertiary/Academic hospital</td>
<td>14 (56.0)</td>
</tr>
<tr>
<td>Regional hospital</td>
<td>4 (16.0)</td>
</tr>
<tr>
<td>Speciality hospital/clinic</td>
<td>3 (12.0)</td>
</tr>
<tr>
<td>Private hospital</td>
<td>2 (8.0)</td>
</tr>
<tr>
<td>General Practitioner clinic</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Not provided</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Methods</td>
<td></td>
</tr>
<tr>
<td>Semi-structured interview</td>
<td>9 (36.0)</td>
</tr>
<tr>
<td>Survey</td>
<td>6 (24.0)</td>
</tr>
<tr>
<td>Audit/structured chart review</td>
<td>2 (8.0)</td>
</tr>
<tr>
<td>Observations</td>
<td>2 (8.0)</td>
</tr>
<tr>
<td>Open-ended interview</td>
<td>2 (8.0)</td>
</tr>
<tr>
<td>Semi-structured interview and focus group</td>
<td>2 (8.0)</td>
</tr>
<tr>
<td>Diary entries</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Semi-structured interview and survey*</td>
<td>1 (4.0)</td>
</tr>
</tbody>
</table>

Note: UK = United Kingdom. USA = United States.

*The mixed methods study used both semi-structured interviews and a survey.
### Table 3 Data extracted from studies.

<table>
<thead>
<tr>
<th>Author, year, country</th>
<th>Aim/Methods</th>
<th>Setting/Sampling</th>
<th>Key Findings of Relevance</th>
</tr>
</thead>
</table>
| **Abbotts, 2010**  
**United Kingdom** | Aim: Understand patients’ perceptions and experiences of topical negative pressure.  
Methods: Qualitative, semi-structured interview and focus group | Setting: Hospital and home  
Sample: Outpatients with varying wound types (abdominal surgery, cardiac bypass surgery, mastectomy, toe amputation, debridement, skin graft) (n=12) | Patients valued healing, self-care, and getting back to normal among nine identified themes. |
| **Alkuwaisi, et al., 2023**  
**Saudi Arabia** | Aim: - Examine self-care behaviours of Saudi cardiac surgery patients post-discharge.  
- Investigate how much variation in self-care behaviours may be attributed to patients’ basic conditioning factors | Setting: 2 specialty hospitals  
Sample: Patients undergoing CABG and VR surgery (n=150) | - Saudi cardiac surgery patients exhibit moderate self-care behaviour post-discharge, with a mean score of 2.53 ± 1.23, 95% CI [2.34, 2.73].  
- Among the top five most performed self-care behaviours were assessing incisions for signs of infection, and contacting a doctor if infection is noticed. |
| **Adugbire, et al., 2018**  
**Ghana** | Aim: Explore surgical patients’ experiences of discharge planning and home care.  
Methods: Exploratory and descriptive qualitative, semi-structured interview | Setting: 1 general surgical unit at 1 regional, referral hospital  
Sample: Patients undergoing general surgery (n=15) | Participants valued discharge education from nurses on self-care but reported no follow-up post-discharge. |
| **Ardizzone, et al., 2013**  
**United States** | Aim: - Explore nurses’ and patients’ perceptions of patient hand hygiene  
- Determine the effectiveness of an educational intervention directed at nursing staff about patient hand hygiene.  
Methods: Non-randomised experimental, education session, survey, and observation. | Setting: 3 surgical wards at 1 oncology hospital  
Sample: Adult surgical patients (n=72), Nurses (n=42) | - 55% of patients reported they were not offered handwashing by nursing staff.  
- All patients agreed that hand hygiene prevents infection. |
<table>
<thead>
<tr>
<th>Author, year, country</th>
<th>Aim/Methods</th>
<th>Setting/Sampling</th>
<th>Key Findings of Relevance</th>
</tr>
</thead>
</table>
| Berg, et al. 2013 Sweden | Aim: Explore day surgery patients' different perceptions of postoperative recovery.  
Methods: Phenomenographic qualitative, semi-structured interview | Setting: 1 private day surgery unit and 1-day surgery unit at a local hospital  
Sample: Patients undergoing orthopaedic, general, and urologic surgery (n=31) | Patients' recovery and return to normal life were influenced by factors such as their readiness for self-care. However, patients also felt objectified and excluded from decision-making. |
Methods: Phenomenological qualitative, semi-structured interviews and focus groups | Setting: 7 clinics at 1 large academic hospital  
Sample: Patients undergoing pancreatic, gastric, colorectal, and hepatic surgery (n=15), clinicians (n=17) | Patients identified four barriers to post-discharge monitoring and communication, such as patient education, technology access, resource availability, and misalignment of communication preferences. |
| Bryson, et al. 2014 Canada | Aim: Explore the postoperative experience of ambulatory surgery, as described by older surgical patients and their caregivers.  
Methods: Qualitative, diary entries | Setting: 1 ambulatory surgical centre at 1 tertiary hospital  
Sample: Patients undergoing orthopaedic and peritoneal surgery (n=102); caregivers (n=102) | Patients and caregivers highlighted challenges such as pain management, independence, and at-home wound care. They also felt unprepared for the perioperative experience and wanted hospitals to improve outpatient communication. |
| Du, et al. 2021 United States | Aim: Develop an adapted RED-S intervention and evaluate intermediate outcomes, specifically adherence to intervention components and patient experiences with the hospital discharge process.  
Methods: Pilot study, survey and electronic chart reviews | Setting: 1 surgical unit at 1 regional tertiary hospital  
Sample: Patients undergoing colectomies (n=21) | 78.1% of patients reported positive or satisfactory discharge information modules from the control versus 75.6% from the RED-S intervention. |
| Exner, et al. 2020 | Aim: Evaluate patients' existing knowledge of hygiene and their  
Methods:  
Setting: 1 department in 1 university hospital |  
- 98% of patients are willing to actively contribute to infection prevention through personal hygiene |
### Patient Participation in Surgical Wound Care: An Integrative Review

<table>
<thead>
<tr>
<th>Author, year, country</th>
<th>Aim/Methods</th>
<th>Setting/Sampling</th>
<th>Key Findings of Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>motivation to actively participate in preventative hygiene measures.</td>
<td>Sample: Patients undergoing general, visceral, thoracic, and vascular surgery (n=321)</td>
<td>- 78% want more information on hygiene, especially wound care (61%).</td>
</tr>
</tbody>
</table>
| Hunt 2016 United Kingdom | Aid: Evaluate the use of Leukomed™ Control postoperatively within acute wounds in conjunction with the promotion of self-care. | Setting: 1 Community-based walk-in GP clinic | - All patients found viewing their wounds through the dressing helpful and reassuring.
 | Sample: Community-based patients with low exuding postoperative acute wounds (Hip replacement, toe amputation, knee cartilage repair, tibia/fibula ORIF) ¹ (n=10) | - 80% rated their experience of wound care activities as excellent. |
| Jonsson, et al. 2011 Sweden | Aim: Describe how patients experience the early postoperative period after colorectal cancer surgery. | Setting: 1 surgical unit at 1 hospital | Participants sought to regain control over their situation and body, experiencing a lack of control postoperatively. Five themes emerged related to this experience. |
| Sample: Patients undergoing colorectal cancer surgery (n=13) | | |
| Kelly, et al. 2016 United Kingdom | Aim: Understand the expectations and perceptions of postoperative inpatients regarding hospital-to-home transition. | Setting: 1 large academic hospital | Patients discussed evolving expectations during preoperative period and the roles of informal caregivers. They stressed the importance of clear communication for building trust, with miscommunication causing anxiety and confusion. |
| Sample: Patients undergoing colon or rectal resections (n=16) | | |
| Lindsay, et al. 2020 United States | Aim: Examine the extent to which patients want to be involved in decision-making in the management of a condition. | Setting: 1 multispecialty orthopaedic surgery clinic | - Patients preferred semi-passive roles in postoperative decisions and wound care.
<p>| Sample: Pre- and postoperative orthopaedic patients (12 trauma, 6 tumour, 29 foot/ankle, 8 sports, 47 spine, 13 hand/upper extremity) (n=127) | - Younger and educated patients preferred more decision-making responsibility. |</p>
<table>
<thead>
<tr>
<th>Author, year, country</th>
<th>Aim/Methods</th>
<th>Setting/Sampling</th>
<th>Key Findings of Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>McMullan, et al. 2019 United Kingdom</td>
<td>Aim: - Provide an in-depth description of patients' and healthcare practitioners' perspectives on the clinical and practical issues associated with postoperative dressing use. - Establish how the experience of novel dressing strategies compares with these perspectives.</td>
<td>Setting: 3 NHS university teaching hospitals and 3 district general hospitals. Sample: Healthcare providers (n=106) and patients undergoing abdominal or obstetric surgery (n=88)</td>
<td>Patients valued simple dressings for protection and comfort, although some felt uncomfortable seeing their wounds. Viewing the wound gave them a sense of control and confidence in healing.</td>
</tr>
<tr>
<td>Monsen, et al. 2016 Sweden</td>
<td>Aim: Explore experiences of NPWT at home, in patients with deep perivascular groin infection after vascular surgery and management in daily life</td>
<td>Setting: Vascular centre at 1 university hospital Sample: Patients with deep perivascular groin infection following revascularisation procedures (n=15)</td>
<td>Patients transitioned from being dependent to self-care competence after discharge. However, patients needed to feel prepared for this responsibility.</td>
</tr>
<tr>
<td>Norlyk &amp; Harder. 2011 Denmark</td>
<td>Aim: Explore the lived experience of participating in a fast-track programme after discharge from the patient's perspective.</td>
<td>Setting: 1 university hospital Sample: Patients with cancer undergoing colonic resection without colostomy (n=16)</td>
<td>Participating in a fast-track program involves patients balancing bodily challenges with self-care. Patients managed their recovery pace and coping strategies individually.</td>
</tr>
<tr>
<td>Roe, et al. 2022 United States</td>
<td>Aim: Evaluate the degree to which patients want to be involved along the care pathway in the management of carpal tunnel syndrome</td>
<td>Setting: 5 academic hospitals Sample: Adult patients undergoing primary and revision carpal tunnel release (n=71)</td>
<td>Patients expressed they prefer to be less involved in postoperative decisions like types of sutures used, immobilisation, length of time for dressing, and when the wound can get wet.</td>
</tr>
<tr>
<td>Sanger, et al.</td>
<td>Aim: Understand the patient experience of SSI and openness to a mobile health</td>
<td>Setting: 2 university general surgery clinics</td>
<td>Patients managing post-discharge wound complications faced challenges in self-care and</td>
</tr>
<tr>
<td>Author, year, country</td>
<td>Aim/Methods</td>
<td>Setting/Sampling</td>
<td>Key Findings of Relevance</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>2014 Italy</strong></td>
<td>(mHealth) wound monitoring app. Methods: Mixed methods, semi-structured interview and survey</td>
<td>Sample: Patients with post-discharge wound complications who had undergone intra-abdominal surgery (n=13)</td>
<td>Communication with providers, often lacking prior knowledge to manage their wounds.</td>
</tr>
<tr>
<td><strong>Saunders, et al. 2021 Australia</strong></td>
<td>Aim: Explore patient experiences, perceived benefits, and suggestions of an eHealth program for pre- and postoperative education for total hip arthroplasty. Methods: Descriptive qualitative, semi-structured interview</td>
<td>Setting: 1 private hospital Sample: Patients undergoing primary elective total hip arthroplasty (n=9)</td>
<td>Patients reported that the eHealth program helped them recover by providing valuable information and motivating them to complete the required exercises. They found the program easy to use and felt it contributed to their positive recovery experience.</td>
</tr>
<tr>
<td><strong>Saunders, et al. 2022 Australia</strong></td>
<td>Aim: Explore patients’ experience of discharge from hospital following orthopaedic surgery Methods: Descriptive qualitative, semi-structured interview</td>
<td>Setting: 1 ward in 1 acute private hospital Sample: Patients undergoing orthopaedic surgery (n=34)</td>
<td>Participants found the written discharge information helpful and a useful reminder of verbal instructions, but some felt the information on postoperative recovery, including medication management, and wound care, was inadequate.</td>
</tr>
<tr>
<td><strong>Sreedharan, et al. 2022 United States</strong></td>
<td>Aim: Evaluate the attitudes of patients and providers towards using a remote wound monitoring application. Methods: Formative descriptive qualitative, semi-structured interview</td>
<td>Setting: 1 colorectal surgery clinic at 1 university hospital Sample: Patients who had undergone elective colorectal surgery (n=5) and colorectal clinicians (n=5)</td>
<td>Patients and providers viewed a smartphone app for remote wound monitoring positively, seeing it as a way to improve communication and get timely evaluations. Patients were willing to adopt the technology.</td>
</tr>
<tr>
<td><strong>Thorup, et al. 2018 Denmark</strong></td>
<td>Aim: - Explore patient experiences of hospitalisation for SSIs treated with NPWT after vascular and cardiac surgery - Explore patient experiences with their participation during hospitalisation for SSIs treated with NPWT after vascular</td>
<td>Setting: 1 cardiothoracic surgery department and 1 vascular surgery department at 1 university hospital. Sample: Patients receiving NPWT for an SSI after vascular and cardiac</td>
<td>Patients hospitalised for SSIs treated with NPWT described a dual experience of needing privacy yet desiring community. They became more self-reliant in managing the NPWT machine over time but felt overlooked by health professionals, leading to frustration and a desire for more participation in their</td>
</tr>
<tr>
<td>Author, year, country</td>
<td>Aim/Methods</td>
<td>Setting/Sampling</td>
<td>Key Findings of Relevance</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>------------------</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
| Tobiano, et al. 2022 Australia | Aim: Describe patients’ experiences of, and preferences for, surgical wound care discharge education and how those experiences predicted their ability to self-manage their surgical wounds.
Methods: Qualitative, semi-structured interview | Setting: 21 surgical wards (day surgery, short-stay, and long-stay) in 2 metropolitan tertiary hospitals
Sample: Adult postoperative surgical patients (n=270) | - 61.3% of patients described surgical wound care treatment options with staff.
-90.4% of patients managed their surgical wounds at home.
- patients involved in wound-care decisions were 6.65 times more likely to manage their wounds at home (OR 6.65, 95% CI 1.45-29.79, p=0.02). |
| Wiseman, et al. 2015 United States | Aim: Describe patients’ willingness to adopt a mobile health smartphone-based intervention for wound monitoring.
Methods: Survey | Setting: 1 university-based hospital clinic
Sample: Adult postoperative vascular surgery patients (n=50) | 92% of patients reported that they were willing to take a digital photo of their wound and answer health-related questions via a smartphone. |
| Yu, et al. 2016 United States | Aim: Describe what species of bacteria recolonise the surgical site postoperatively, at what rates, and how early vs delayed showering might affect the bacterial load after TKA.
- Evaluate patients’ preferences regarding the ability to shower early.
Methods: Randomised controlled trial, intervention and survey | Setting: Not provided
Sample: Patients undergoing primary TKA for osteoarthritis (n=32)
Intervention: shower at 48 hours (n=16) vs approximately 2 weeks postoperatively (n=16)
Control: nonoperative knee of patients (n= 32) | The majority of patients felt early showering of wounds was important both before and after surgery, with no statistical difference between groups. |

Note: CABG = Coronary Artery Bypass Graft. CI = Confidence Interval. GP = General Practitioner. NHS = British National Health Service. NPWT = Negative Pressure Wound Therapy. OR = Odds Ratio. ORIF = Open Reduction Internal Fixation. RED-S = Re-Engineered Discharge for Surgery. SSI = Surgical Site Infection. TKA = Total Knee Arthroplasty. VR = Valve replacement.

1 Chronic and non-surgical wounds were excluded from data extraction.
Supplementary material Appendix B presents the quality appraisal assessments for the included studies. During the quality assessment using the MMAT, we found that the included studies varied in their reporting quality. All included studies passed the initial screening criteria for the MMAT, indicating their suitability for inclusion. Any distinction in their quality after that point is subjective as there is no cut-off value for high or low quality (Hong et al., 2018b). While 10 qualitative studies (Adugbire and Aziato, 2018; Berg et al., 2013; Bryson et al., 2014; Jonsson et al., 2011; Kelly et al., 2016; McMullan et al., 2019; Monsen et al., 2016; Norlyk and Harder, 2011; Saunders et al., 2022; Thorup et al., 2018) and one quantitative study (Tobiano et al., 2023) met all reporting criteria, several studies had notable limitations.

The most common issue for qualitative studies was a lack of clear links between data collection, analysis and interpretation (Abbotts, 2010; Brajcich et al., 2021; Saunders et al., 2022; Sreedharan et al., 2022). The randomised controlled trial had limitations in blinding, sample size, randomisation, and data presentation (Yu et al., 2016). No baseline demographics and clinical characteristics tables were included. The non-randomised study lacked patient baseline data, and a description of the sampling method, and did not statistically control for confounding factors (Ardizzone et al., 2013). Six of the seven quantitative descriptive studies omitted target population descriptions (Exner et al., 2020; Hunt, 2016; Lindsay et al., 2020; Wiseman et al., 2015), used convenience sampling (Hunt, 2016; Roe et al., 2022; Wiseman et al., 2015), had small samples (Du et al., 2021; Hunt, 2016; Roe et al., 2022; Wiseman et al., 2015), or lacked validated measures (Exner et al., 2020; Hunt, 2016; Wiseman et al., 2015), potentially limiting generalisability.

**Thematic synthesis**

In this review, themes were derived from a thematic synthesis of data presented in the included studies, such as findings (i.e. patient quotes and survey results) present in the findings and discussion section and appendices. Table 4 presents the three themes and eleven categories identified in the thematic synthesis. Patient participation in surgical wound care was captured in three themes: 'I am healing: how I face challenges in my wound care journey', ‘Taking charge of my healing: I am actively engaging in wound care’, and ‘Navigating the path to recovery: How others shape my experience’.
### Table 4 Themes and categories within each domain

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Codes/Verbatim Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am healing: how I face challenges in my wound care journey</td>
<td>I need to be in the right mindset to participate in my wound care</td>
<td>“I will never get out of here; I will never get well.” (Thorup et al., 2018)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I was really nervous about changing my own dressings” (Kelly et al., 2016)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“You have to trust yourself the whole time that I can do this” (Berg et al., 2013)</td>
</tr>
<tr>
<td>My experiences define my understanding and expectations of the wound</td>
<td></td>
<td>“It took a long time to heal, and it oozed a lot… I thought it was normal… I didn’t know that other people didn’t have it, didn’t have a clue.” (Sanger et al., 2014)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Having that information prior to the surgery itself, I feel like, made me a more informed patient when I was in the hospital.” (Brajcich et al., 2021)</td>
</tr>
<tr>
<td>My body is an opponent that I need to conquer to heal</td>
<td></td>
<td>“Discomfort in the form of pain was frequently described, often in connection with changing the wound dressing. Pain was also described when bending over, sitting in the same position for a long period, or when changing position” (Monsen et al., 2016)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“All of the participants experienced physical symptoms and difficulties, which affected them negatively and made them feel out of control of their own bodies.” (Jonsson et al., 2011)</td>
</tr>
<tr>
<td>Recovery is about regaining my independence</td>
<td></td>
<td>“To be able to resume normal daily activities and to regain their independence were goals that participants saw as positive and as clear signs of improvement.” (Norlyk and Harder, 2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“All patients reported that this help was critical, but they were eager to become self-sufficient as soon as possible.” (Kelly et al., 2016)</td>
</tr>
</tbody>
</table>
| Taking charge of my body’s                                           | Managing my body’s                                                       | “There are a lot of things you do without thinking. You just take something or lift something without thinking … now you have to keep the new restrictions at the
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Codes/Verbatim Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>healing: I am actively engaging in wound</td>
<td>recovery</td>
<td><em>back of your mind.</em> (Norlyk and Harder, 2011)</td>
</tr>
<tr>
<td>care</td>
<td></td>
<td>“It’s just common sense for me. Because what else do you have to go by? Then it’s really just to feel your own signals” (Berg et al., 2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I decided to throw out the painkillers (...) I got a little more restless during the night, but somehow I felt more satisfied because I got better at recognizing my bodily signals. Not as good as I was before, because they were completely different signals, but they were not strange in the same way.” (Norlyk and Harder, 2011)</td>
</tr>
<tr>
<td>I was actively caring for my wound</td>
<td></td>
<td>“I would have been a little more …careful and more concerned about how I did things around my daily chores, like having a shower or going to the toilet and stuff like that” (McMullan et al., 2019)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I was concerned about the drainage. There was a dark spot, and I was like, ‘What is this? Is this necrotic? What's going on with this?’” (Sreedharan et al., 2022)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“All of the patients within the evaluation carried out their own wound cleansing and dressing regimen independently and competently following verbal instruction.” (Hunt, 2016)</td>
</tr>
<tr>
<td>My voice matters: communicating as an</td>
<td></td>
<td>“One of the nurses came and said, ‘We’re going to insert a permanent urine catheter in you.’ I didn’t have a choice.” (Berg et al., 2013)</td>
</tr>
<tr>
<td>active participant in my care</td>
<td></td>
<td>“Dr. X and I talked about [discharge] and he said you know physically he said I think you could go home today but you know what how confident are you today, […] and I said you know I really do think I need one more day and he said one more day it is. So that you know, I felt a little empowered by that and I knew the day I was discharged that I was ready to go.” (Kelly et al., 2016)</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Codes/Verbatim Examples</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Embracing technology: harnessing tools and</td>
<td></td>
<td>“I actually used My Chart to send a message and a picture of my wound.” (Sreedharan et al., 2022)</td>
</tr>
<tr>
<td>devices for my wound care</td>
<td></td>
<td>“I thought [the app] was excellent. I had an issue post op and I contacted them, and they got in contact with me straight away. It was all good.” (Saunders et al., 2021)</td>
</tr>
<tr>
<td>Navigating the path to recovery: How others</td>
<td>My hospital experience and the transition to</td>
<td>“But I mean it’s this conveyor belt principle. They don’t have time to talk to the patient in a calm atmosphere, to explain etc…” (Berg et al., 2013)</td>
</tr>
<tr>
<td>shape my experience</td>
<td>home</td>
<td>“I thought it was real early to have been discharged. … I could barely walk and I couldn’t hold my pee and I wasn’t normal at all… and weak and out of it.” (Sanger et al., 2014)</td>
</tr>
<tr>
<td>My experience connecting with healthcare</td>
<td></td>
<td>“First, I called the nurse’s hotline or whatever. And I talked to them, and it was hard to get a hold of anyone who even knew what was going on with my case or anything.” (Sanger et al., 2014)</td>
</tr>
<tr>
<td>staff and obtaining information</td>
<td></td>
<td>“And post-surgery there were questions about how am I going, and am I doing the therapy. Stuff like that would prompt you to keep on going…. That certainly helped get me through the whole process” (Saunders et al., 2021)</td>
</tr>
<tr>
<td>Support beyond the hospital: Family and</td>
<td></td>
<td>“My wife always cleaned my body with sponge, soap and water.” (Adugbire and Aziato, 2018)</td>
</tr>
<tr>
<td>caregivers' roles in my healing journey</td>
<td></td>
<td>“During the first couple of days, it annoyed me intensely that I felt he had me under control. It was because he was afraid that something might happen to me … something inside me said, ‘Stop it’ and ‘Stop running around, stop watching me all the time.’ It’s strange really, because you know that he is doing it for you (…) but I couldn’t help thinking ‘Mind your own business and leave me alone.” (Norlyk and Harder, 2011)</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Codes/Verbatim Examples</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>-------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I want to talk to somebody” (Brajcich et al., 2021)</td>
</tr>
</tbody>
</table>
I am healing: how I face challenges in my wound care journey

The first theme highlighted the profound impact of surgical wounds on patients' mental well-being and their journey to recovery. Patients’ cognitive processes, mindsets, and self-concepts played pivotal roles in shaping their approach to wound care. Some patients were challenged by wound-related complications, which caused them to feel alone, anxious, and vulnerable: “You don't have anybody to talk to. You'd so like to talk to somebody and ask if it's natural to feel this poorly” (Berg et al., 2013). These difficulties often dampened their enthusiasm for active wound care, necessitating increased support from healthcare professionals, family, and other sources. Nevertheless, many patients recognised their capacity to contribute to their healing process and assumed responsibility for wound care.

Previous experiences influenced patients’ understanding, expectations, and readiness for involvement in the wound-healing process. When patients had prior knowledge and wound healing experience or had managed a wound drain previously, they found it easier to accept their medical condition and felt empowered to care for their wound: “Somehow in my head, I felt okay, this will be, I have had this before.” (Kelly et al., 2016). In contrast, those lacking such insights often had their autonomy restricted: “I just thought my knee would be good, like it was before I hurt it. That was my belief about the recovery” (Berg et al., 2013).

Patients' bodies served as both battlegrounds and pathways to recovery. They faced physical and mental barriers, including pain, sensory disturbances (such as numbness or hypersensitivity), medication side effects (like drowsiness or dizziness), and complex bodily signals (like nausea or discomfort). These factors frustrated patients and undermined their sense of agency: “I didn't feel in control of my actions.” (Bryson et al., 2014). Patients reported their bodies actively hindered their abilities to accurately visualise their wounds and effectively participate in wound care. Severe pain, for instance, made it challenging to focus on wound care tasks or assess the wound's condition accurately. Patients also noted medications for pain relief often had a numbing or amnesic effect, impacting their alertness and self-care abilities:

“I may have normally [sought information about wound care], but I was taking a fair amount of probably – was it Oxycodone? – so no, I didn't really think of that (laughs)” (Sanger et al., 2014).

For many patients, it appeared participation in wound care or recovery could not occur until these signals and side effects were managed.

Despite these obstacles, patients viewed regaining independence and self-sufficiency as significant milestones in their recovery journey. While the exact process varied between individuals, the overall feeling of progress was consistently positive, with patients expressing a sense of achievement and empowerment as they healed: “All in all, you feel much better when you can
say, ‘well, you can do this yourself [...] it really means a lot that you do not have to ask for everything.” (Norlyk and Harder, 2011). In their pursuit of independence, patients were motivated to actively engage in wound care practices and contribute to their successful healing.

**Taking charge of my healing: I am actively engaging in wound care**

The second theme emphasised patients' proactive involvement in their wound care journey, which encompassed self-care, communication, and the integration of technology to enhance their participation in care. Patients re-established their capacity for self-care and wound management as they recovered from surgery, engaging in practices like wound cleaning, wearing protective attire, and adjusting daily routines. As one patient stated,

“I’m just making sure I be careful at nighttime … I’m making sure I’m wearing tops ... so I don’t knock [the wound] or rub myself, or when I roll I don’t pull.” (McMullan et al., 2019)

Self-care extended beyond wound care to include personal hygiene, nutritional intake, and physical activity levels, all recognised by patients as crucial for effective wound healing. As another patient mentioned, “I know that protein is helpful for wound healing” (Thorup et al., 2018).

Patient participation in wound care also involved effective communication, shared decision-making, and access to relevant tools such as wound care education. While some patients encountered difficulties adhering to prescribed treatments due to communication barriers, others found their shared decision-making experience satisfactory. One participant recounted,

“After two weeks of my being sick-listed it was still bleeding, so I needed to be sick-listed longer. I rang up [my surgeon] and we agreed on one more week. It was no problem” (Berg et al., 2013)

Technology, including wound therapy devices, e-health programs like ‘My Hip Journey’ (Saunders et al., 2021), and mobile applications played a significant role in patient participation. Patients overcame challenges with their wounds by utilising mobile applications for wound documentation, communication with healthcare professionals, and access to expert advice.

Patients also managed medical equipment, such as negative pressure wound therapy devices, effectively. This entailed mitigating device noise, waterproofing for showers, replacing batteries, and troubleshooting alarms to maintain continuous functionality.

“That noise, when you’re trying to go to sleep. [...] I take a box and the biggest quilt I can find, and wrap it up and push it into the box and put some pillows over it – then I can sleep.” (Monsen et al., 2016)
Navigating the path to recovery: How others shape my experience

The third theme explored external factors that influenced patients' wound-healing journeys, particularly their experiences within the hospital environment, interactions with healthcare professionals, and the support provided by their families and caregivers. This theme emphasised the significance of patient-centred care both during hospitalisation and after discharge, shedding light on how healthcare system processes shaped patient experiences and participation in wound care.

Within the hospital, patients often felt overwhelmed by a complex and impersonal system that left them with a profound sense of powerlessness. One patient vividly likened it to a “conveyor belt principle” (Berg et al., 2013), where the hurried pace left little room for calm explanations or meaningful personal interactions. This sentiment resonated with another patient who felt that healthcare professionals were “using us to fill holes in the daily program for surgery. Of course, they can do that, but I find it a bit irritating” (Thorup et al., 2018).

These descriptions highlighted the challenges patients faced within the hospital's intricate organisational framework, which affected crucial aspects like rounds, dressing change schedules, and patient-professional interactions. Consequently, the busyness and complexity of the clinical environment often led to feelings of apathy, confinement, privacy loss, and diminished autonomy, all of which negatively impacted patients' motivation to actively participate in wound care during their hospital stay.

The interactions patients had with healthcare professionals influenced their level of engagement in wound care. Staff who demonstrated empathy and confidence in their care built trust with patients, which in turn motivated active participation. On the other hand, mechanical care and inconsistent interactions with healthcare professionals resulted in frustration and withdrawal by patients. One patient explained, “Some were also showing respect to me by speaking politely to me and some would ask me whether I had any problem that I want to share with them” (Adugbire and Aziato, 2018), while another expressed frustration with inconsistent care, stating, “Then when you get a different nurse coming in, different nurses have different ways of doing things...” (Kelly et al., 2016).

Post-discharge, patients oscillated between feeling relief and isolation as they faced challenges in adapting to managing their wounds at home. They often felt isolated, especially when healthcare providers did not follow up. Patient feedback like “They kicked me out too fast” and “I was ready to leave” (Kelly et al., 2016) highlighted the complexities of the transition from hospital to home.

Family and caregiver support played a pivotal role in patients' post-discharge recovery, fostering both a sense of community and emotional stability. Patients often discussed the significance of their social support networks in addressing home care challenges. Spousal involvement in
patients' hygiene routines, exemplified by one participant who stated, “*My wife always cleaned my body with a sponge, soap, and water*” (Adugbire and Aziato, 2018), highlighted how family support directly influenced patients' participation in wound care. Patients' narratives revealed a nuanced perspective on social support as both a facilitator and, at times, a challenge in their healing process. Some heavily relied on spouses for assistance and expressed gratitude, while others voiced concerns about inconveniencing their families. Regardless, support systems provided emotional encouragement, social interaction, and vital motivation throughout their recovery.

**Discussion**

Our review suggests that patient participation in surgical wound care is multifaceted and influenced by internal (i.e., psychological, physical, and experiential) and external (i.e., environmental) factors. Patient engagement in surgical wound care is not a linear process; rather, our findings suggest that patients participate in a diverse and holistic spectrum of activities related to their surgical wound care, extending to innovative approaches such as integrating technology. Healthcare professionals’ interactions also play a crucial role in establishing patient-professional relationships, however, communication challenges caused patients to struggle post-discharge. By understanding patients’ experiences with the surgical wound care journey, we can tailor care to patients’ needs to promote active participation.

The first theme in the review described the challenges presented by surgical wounds. We found that patients’ responses to postoperative wound care challenges are influenced by their physical symptoms, cognitive processes, and prior experiences. Like other studies, we found that pain, sensory disturbances, and medication side effects hindered patients’ involvement in wound care, which has been found to frustrate patients and disrupt their lives (McCaughan et al., 2018), and can influence their psychological well-being (Tanner et al., 2012; Walker et al., 2023). However, despite these challenges, we found that patients' intrinsic motivation to recover and regain independence compels them to actively participate in overcoming wound care obstacles. Other researchers have also found that patients' motivation, mindset, and self-perception, play a pivotal role in shaping their response to postoperative wound care challenges (McCaughan et al., 2018; Moore et al., 2021). We also found that patients with prior knowledge and experience in wound healing or managing complications felt empowered and actively engaged in their care. This aligns with existing research that has shown that patients with prior healthcare experiences demonstrated increased confidence, independence, and proactivity in managing their wounds (Hibbard and Greene, 2013; Ocloo et al., 2020). Prioritising interventions that consider the individual needs and experiences of patients could further enhance patient engagement in postoperative wound care (Prey et al., 2014; Tobiano et al., 2021). Overall, nurses need to have a comprehensive understanding of each individual patient, including their symptoms, disposition, motivation, and prior experiences, to facilitate more proactive patient participation.
The second theme described how patients demonstrated a holistic spectrum of participation, integrating self-care, daily routine adjustment, and medical technology into wound care. For instance, comprehensive self-care practices extended beyond immediate wound management to include personal hygiene and physical activity. The integration of self-care into their daily routines, as observed in practices like utilising shower times for wound cleaning, resonates with the findings of chronic wound management studies (Green et al., 2013; Kapp and Santamaria, 2017). This time-saving and convenient approach not only contributed to efficient wound management but was found to significantly enhance patients' emotional and physical well-being (Kapp et al., 2018). Researchers have also suggested that patients pursued wound self-care because of a desire to be independent (Kapp and Santamaria, 2017), which echoes our findings in the first theme. This desire for independence was a driving factor behind patients' pursuit of wound self-care, as they sought to maintain a sense of control and autonomy over their recovery. Findings from our review also highlighted the growing role of technology integration in modern wound care. Patients utilised mobile applications, e-health programs, and wound therapy devices for documentation, communication, and expert advice. These results draw parallels with other studies, where patients utilised similar technology and actively participated in the management of wound devices (Darrat et al., 2021; Grünloh et al., 2018; Kane et al., 2020; Kang et al., 2022). By using these devices as tools for participation, patients can take greater control over their healing process and establish their autonomy in managing their wounds. This holistic incorporation of technology aligns with the vision of a technologically integrated healthcare landscape proposed by Scheper et al. (2019). While current research recognises the pivotal role of self-care and technology in patient participation, future studies must prioritise ongoing development and evaluation of these approaches to wound care, to ensure the full spectrum of patient participation is promoted.

The final theme described how healthcare professionals' interactions significantly influenced patient participation in wound care, with empathetic and confident care fostering trust, while mechanical and inconsistent interactions led to withdrawal. Numerous studies have demonstrated that establishing a strong patient-provider relationship based on open communication and mutual respect is crucial as a basis for patient participation (Davidson et al., 2022; Hammoud et al., 2020; Rocque et al., 2019). However, persistent issues identified in our review, such as insufficient information provision and poor communication, have often left patients in other studies ill-prepared to manage their wounds effectively when discharged home (Kang et al., 2018; Tobiano et al., 2023). Poor communication and inadequate information from healthcare professionals can drive patients to rely on unreliable online sources (Rawson et al., 2016), resulting in suboptimal care practices and increased risks of complications like infection (Coulter and Ellis, 2006; Katz et al., 2007; Tiwary et al., 2019). Failure to bridge the communication gap in postoperative wound care can lead to compromised patient outcomes, increased healthcare costs, and a higher risk of hospital readmissions (McCaughan et al., 2018; Morgan-Skinner, 2018; Sanger et al., 2014). Therefore, addressing these challenges requires a
comprehensive re-evaluation of healthcare communication practices. This is essential not only to improve patient outcomes but also to create a more efficient and ethical wound care information delivery system that actively fosters patient participation.

Limitations and Strengths
This review provides valuable insights into patient perspectives on participation in surgical wound care, but we acknowledge certain limitations. Our search, though comprehensive, was limited to three major databases, and only English studies were selected. As a result, most studies included in our review were conducted in predominantly Western settings, potentially limiting the generalisability of our findings to diverse cultural or socioeconomic contexts, particularly those in developing countries. Furthermore, despite receiving guidance from a research librarian during the search strategy, there remains a possibility that eligible articles were inadvertently missed, which, in conjunction with incorporating studies of varying quality, may introduce limitations in the robustness of our analysis and the reliability of the conclusions drawn.

However, we undertook quality assessments using the MMAT framework to objectively evaluate the reliability, validity, and rigour of findings from the included articles. Our inclusion of studies of varying quality levels was deliberate and based on our criteria, which encompassed all studies meeting these standards, irrespective of their quality. Including these studies helped address the heterogeneity in the literature, ensuring that our review encompassed a wide range of methodologies, designs, and quality levels. This approach allowed us to identify patterns and trends consistent with higher-quality research, enhancing the transparency of our review process and avoiding potential bias. Another strength of this review is that we followed a detailed a priori protocol and undertook an independent review process for each study, involving two reviewers. An additional strength lies in the robust data analysis methods employed, notably a widely recognised thematic synthesis approach. This method facilitated a nuanced understanding of the multifaceted nature of patient participation, contributing to the richness and depth of the review findings.

Recommendations
To improve postoperative wound care, clinicians and educators should adopt a personalised approach by tailoring care plans to each patient's unique needs, preferences, lifestyle, and psychosocial factors. This involves using personalised communication, such as two-way or teach-back conversations, to ensure effective understanding of the individual patient (Morgan-Skinner, 2018). Additionally, delivering information in a way that aligns with the patient's preferred format and frame of reference is crucial (Hume and Tomsik, 2014). Overall, clinicians should provide information that prepares patients to manage their recovery after discharge, ensuring patients not only grasp the specific tasks involved but also understand the broader context of their recovery (Andersson et al., 2021; Hume and Tomsik, 2014). This approach enables patients to comprehend medical information, set realistic recovery goals, anticipate complications, and actively participate in managing
their care.

As patients become more accessible through personal devices, opportunities arise to include the patient through e-health programs and apps that include wound photography and access to advice. As our review indicates a readiness among patients to embrace these interventions, there is a compelling case for clinicians to implement these innovative approaches within healthcare settings. For this to be successful, educators of healthcare providers may need to offer comprehensive training on integrating this technology into patient care.

Further research into the role of patient participation in self-care and technology may be required to enhance post-discharge wound care. Given our findings highlight the holistic spectrum of patient participation, future studies should focus on refining and expanding these approaches to facilitate a comprehensive understanding of their feasibility and effectiveness. Additionally, researchers could explore other alternative ways patients can participate in surgical wound care (Andersson et al., 2021; Moore et al., 2021). Overall, these recommendations aim to optimise patient outcomes, streamline healthcare delivery, and promote a more patient-centric wound care approach.

Conclusion

In conclusion, our review highlights the multifaceted nature of patient participation in surgical wound care 30 days post-surgery, emphasising the pivotal role of patients as motivated, resilient, holistic, and resourceful participators in their wound care. We found that patient engagement, and perhaps in turn postoperative outcomes, are affected by wound-related, physical, and emotional challenges. Our findings reveal the expanding scope of patient participation in wound care beyond traditional tasks, encompassing holistic well-being and technology integration. However, poor patient-provider communication demotivates patients and impacts care practices. Healthcare providers should promote effective communication methods, personalise information delivery, and explore technology integration to optimise outcomes and increase independence. These insights encourage the evolution of wound care practices towards a personalised, patient-oriented approach that empowers patients to play an active role in their recovery. By embracing these insights, healthcare providers can usher in a new era of personalised wound care that enhances patient autonomy and overall well-being.

Acknowledgements
To Eva Bavin for her assistance in quality appraisal.
To Leanne Stockwell for her assistance in research and search strategy development.

Conflict of interest
None.

Funding sources
No external funding.
Patient Participation in Surgical Wound Care: An Integrative Review

References


participate in preventative hygiene measures. GMS HIC 15, 1–6.
https://doi.org/10.3205/dgkh000336

https://doi.org/10.1016/j.ijsu.2021.106136

https://doi.org/10.1111/jocn.15135


https://doi.org/10.1016/j.ajic.2020.05.039


https://doi.org/10.1310/hpj4902-112

https://doi.org/10.12968/bjon.2016.25.15.534


Page | 31
Patient Participation in Surgical Wound Care: An Integrative Review


Sanger, P.C., Hartzler, A., Han, S.M., Armstrong, C.A.L., Stewart, M.R., Lordon, R.J., Lober,


Declaration of Interest statement:
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this manuscript.