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REVIEW

Impact of self-care on the prevention of postoperative complications in patients undergoing thyroidectomy: a literature review

Impacto del autocuidado en la prevención de complicaciones postquirúrgicas en pacientes sometidos a tiroidectomía: revisión de la literatura

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ABSTRACT

Objective: To analyze the impact of self-care on the prevention of postoperative complications in adult patients undergoing thyroidectomy. Methods: An integrative literature review with a descriptive approach was conducted using publications indexed in PubMed, Scopus, Web of Science, SciELO, Embase, and ScienceDirect. Studies published between 2020 and 2025 in Spanish, English, and Portuguese related to health education, postoperative management, and patient participation were included. Results: Self-care practices contributed to reducing complications such as hypocalcemia, surgical wound infections, voice alterations, and hospital readmissions. Structured nursing education improved adherence to pharmacological treatment, promoted early recognition of warning signs, and facilitated progressive reintegration into daily activities. Conclusions: The evidence highlights self-care as a key component in postoperative recovery and reinforces the role of nursing in patient safety, clinical outcomes, and quality of life after endocrine surgery.

Keywords: Endocrine surgery; Nursing care; Patient education; Postoperative recovery; Therapeutic adherence.

RESUMEN

Objetivo: Analizar el impacto del autocuidado en la prevención de complicaciones postquirúrgicas en pacientes adultos sometidos a tiroidectomía. Métodos: Se realizó una revisión integrativa de la literatura con enfoque descriptivo, utilizando publicaciones indexadas en PubMed, Scopus, Web of Science, SciELO, Embase y ScienceDirect. Se incluyeron estudios publicados entre 2020 y 2025 en español, inglés y portugués relacionados con educación en salud, manejo postoperatorio y participación del paciente. Resultados: Las prácticas de autocuidado contribuyeron a disminuir complicaciones como hipocalcemia, infecciones de la herida quirúrgica, alteraciones de la voz y reingresos hospitalarios. Además, la educación estructurada proporcionada por enfermería mejoró la adherencia al tratamiento farmacológico, favoreció la identificación temprana de signos de alarma y facilitó la reincorporación progresiva a las actividades cotidianas. Conclusiones: La evidencia destaca al autocuidado como un componente esencial en la recuperación postoperatoria y refuerza el rol de enfermería en la seguridad del paciente, los resultados clínicos y la calidad de vida después de la cirugía endocrina.

Palabras clave: Cirugía endocrina; Cuidado de enfermería; Educación del paciente; Recuperación postoperatoria; Adherencia terapéutica.

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INTRODUCTION

Thyroid surgery has undergone a remarkable evolution. In the past, it was considered a high-risk procedure because of complications such as bleeding and infections, and advances in surgical techniques and perioperative management have significantly increased patient safety. However, providing adequate care remains essential to ensure optimal recovery (1).

Globally, thyroidectomy is among the most common endocrine surgeries. The prevalence of thyroid diseases varies because of environmental, genetic, and nutritional factors, making it necessary to assess patients' knowledge of postoperative self-care to promote their recovery and prevent complications (2).

In Europe and North America, thyroidectomy is being increasingly performed on an outpatient basis, which requires rigorous patient selection and effective education on self-care (3). This trend implies that patients must acquire greater knowledge to manage their recovery and avoid complications, while in Latin America, variations in postoperative protocols persist, including differences in the use of drains, pain management, calcium supplementation, and clinical follow-up (4–6).

Despite the increase in research on postoperative management in thyroidectomy, few systematic reviews have specifically analyzed the impact of self-care on the prevention of complications from a nursing perspective. Furthermore, variability in clinical practices persists in Latin America, highlighting the need to synthesize the available evidence to strengthen evidence-based practices (6).

Among the most significant postoperative complications are hypocalcemia and laryngeal nerve injury, which require timely identification and management (7,8). Therefore, it is essential that patients recognize warning signs such as cramps, numbness, or voice changes, in addition to following recommendations regarding hydration, rehabilitation exercises, and pain management (9). Proper dietary management, particularly the intake of calcium and vitamin D, is also key to preventing complications such as hypocalcemia (10).

In Ecuador, the incidence of thyroid disorders has increased over the past decade, leading to a rise in the number of thyroidectomies performed annually (11). However, the level of patient preparedness to take charge of their own care—including identifying warning signs, wound care, adherence to hormone therapy, medical follow-up, and resuming physical activities—remains unknown.

The implementation of structured care plans improves clinical outcomes, reduces complications, and increases patient satisfaction (11,12). In this context, nursing plays a fundamental role in patient education, and evidence-based guidelines have proven effective in optimizing postsurgical care (13,14). Similarly, strengthening professional competencies in health education is essential for improving self-care instruction.

Adequate self-care education can reduce costs associated with preventable complications, hospital readmissions, and unscheduled visits, contributing to the sustainability of the healthcare system (15).

This study is a descriptive integrative literature review. The research question was as follows: What is the impact of self-care strategies on the prevention of postoperative complications in adult patients undergoing thyroidectomy? Under the PICO model, the population consisted of adult patients undergoing thyroidectomy (P), the intervention was self-care strategies (I), the comparison was conventional care (C), and the outcome was the prevention of complications and improved recovery (O). The objective of this study was to analyze the available scientific evidence on self-care practices among adult patients undergoing thyroidectomy and their relationship to the prevention of postoperative complications.

METHODS

This research was conducted through an integrative literature review with a descriptive approach aimed at synthesizing the available scientific evidence on the impact of self-care on the recovery of adult patients undergoing thyroidectomy. The process of identifying and selecting studies was carried out using the PRISMA diagram as a guide for the search and selection process to ensure methodological transparency and rigor. The review was not registered on international platforms such as PROSPERO, as it was an integrative literature review with a descriptive approach. However, the methodological process was conducted in accordance with PRISMA recommendations to ensure transparency and consistency in the selection and analysis of scientific evidence.

A literature search was conducted for 2025 in scientific databases selected for their relevance, namely, PubMed, Scopus, Web of Science, Embase, ScienceDirect, and SciELO, using standardized descriptors and Boolean operators (AND, OR). The terms used included self-care, thyroidectomy, postoperative care, and patient education, as well as their English equivalents: self-care, thyroidectomy, postoperative care, and patient education. The combination of these descriptors allowed for broadening the search sensitivity and ensuring the identification of studies relevant to the research objective.

Original articles and scientific reviews published between 2020 and 2025, in Spanish, English, and Portuguese, were included. These studies addressed the role of self-care and health education in adult patients undergoing thyroidectomy, with an emphasis on the prevention of postoperative complications, such as hypocalcemia, surgical wound complications, and the early detection of warning signs. Editorials, letters to the editor, gray literature, single-case studies, case series with fewer than 10 patients, articles without access to the full text, and studies that did not provide evidence regarding patient empowerment or active participation in the recovery process were excluded.

Study selection was conducted independently by two reviewers through the reading of titles, abstracts, and full-text articles. Discrepancies identified during the selection and evaluation process were resolved by consensus among the researchers. Additionally, a double-blind review process was conducted to minimize bias in study inclusion.

Among the 37 included studies, the distribution by database was as follows: PubMed (n = 9), Scopus (n = 3), Web of Science (n = 8), SciELO (n = 11), and other sources (n = 6). Most of the articles were in Spanish (n = 27), followed by English (n = 9) and Portuguese (n = 1).

The methodological quality and risk of bias of the included studies were assessed using criteria adapted from the Joanna Briggs Institute (JBI) tools, considering methodological clarity, consistency between objectives, methods, and results, description of educational interventions, and clinical relevance of the findings. Studies with greater methodological rigor and internal consistency were prioritized, excluding those with incomplete or insufficient information for the objectives of this review.

The selected studies were analyzed through critical and systematic reading, and the results were organized into thematic dimensions related to adherence to pharmacological treatment, self-care education, prevention of postoperative complications, and improvement in the patient's quality of life following thyroidectomy.

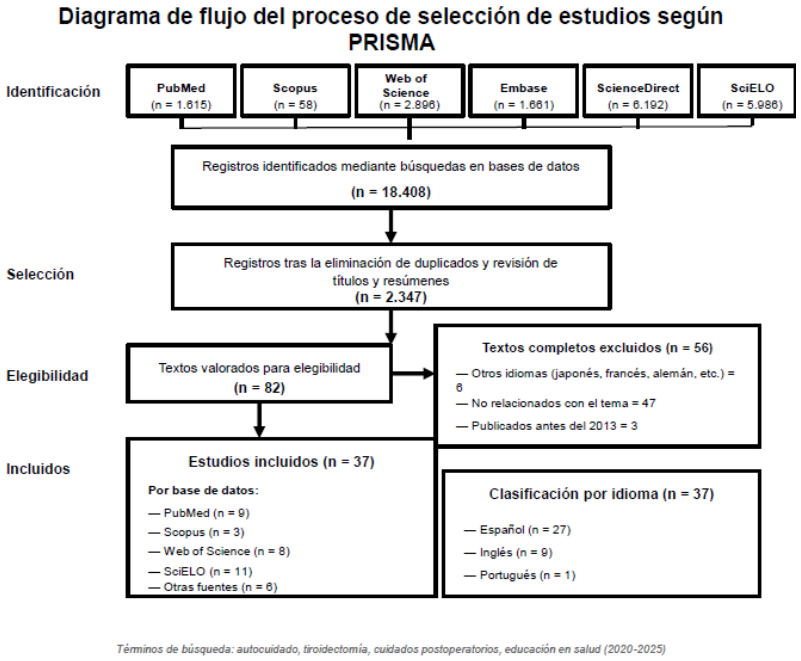

Figure 1. PRISMA flow diagram of the study selection process.

Source: Author's own work.

RESULTS

Thirty-seven scientific studies published between 2020 and 2025 related to the impact of self-care in adult patients undergoing thyroidectomy were included. The studies originated primarily from Latin America, Europe, and Asia (), with a predominance of descriptive designs, integrative reviews, observational studies, and systematic reviews. Most of the research was conducted in hospital settings and focused on postoperative education, prevention of complications, and improvement in quality of life.

With respect to postoperative complications, educational interventions and self-care practices help reduce the incidence of postoperative hypocalcemia through the early identification of symptoms such as paresthesia, muscle cramps, and spasms, thereby facilitating timely care and reducing associated complications (7,8). Similarly, adherence to pharmacological treatment and clinical follow-up were identified as important factors for the patient's metabolic stability and recovery (10,12).

With regard to surgical site infections, studies have reported that education on hygiene, handwashing, proper dressing management, and monitoring for warning signs reduces the risk of infections, seromas, and cervical hematomas and impairs healing (21,25,27). Similarly, the implementation of postoperative recovery protocols helped reduce local complications and enhanced patient safety during the recovery period (19). Several studies have demonstrated that voice therapy and postoperative follow-up promote vocal recovery and improve the quality of life for patients who have undergone thyroid surgery (9,18). Furthermore, preoperative education reduces anxiety levels and improves emotional preparedness for the surgical process, facilitating patient adaptation during the postoperative period (23,24). The results also revealed that structured nursing education programs strengthen treatment adherence, pain management, and the gradual return to daily activities, helping to reduce hospital readmissions and improve patients' functional recovery (12,19,29). With respect to postoperative pain, the evidence supports the use of multimodal strategies and therapeutic education to promote active patient participation in recovery (29,37). Furthermore, factors such as educational level, family support, health literacy, and emotional state directly influence self-care capacity and adherence to postoperative recommendations (13,17,22). Similarly, some studies have reported that emotional disturbances and changes in body image following thyroidectomy can negatively affect a patient's quality of life and recovery process (30). Furthermore, satisfaction with the care provided by nursing staff was associated with greater safety, confidence, and adherence to postoperative instructions (31).

Table 1. Self-care strategies in adult postoperative patients who underwent thyroidectomy.

Aspect	Nursing intervention	References	Relationship to Dorothea Orem's self-care model
Surgical wound care	Provide guidance to the patient on the importance of keeping the wound clean and dry, offering information on how to prevent contamination, including proper hand washing.	Fajardo Dolci et al. (21)	Contributes to universal self-care requirements, aimed at risk prevention and maintaining physical integrity.
Incision care	Provide education on the correct procedures for surgical wound care, including proper dressing changes and monitoring of sutures, as well as actions to take in the event of bleeding or dehiscence.	Ortiz Quiroz et al. (27)	Addresses self-care requirements related to health deviations, facilitating the early detection of complications.
Emotional well-being	Assess the patient's emotional well-being and, if necessary, offer support for managing anxiety or confusion in the postoperative period.	Valle Dávila et al. (32)	It helps strengthen self-care capacity, promoting adaptation to changes resulting from the surgical process.
Pain management	Develop a comprehensive pain management plan that includes education on the mechanisms of pain perception, the correct use o , and complementary therapeutic alternatives.	García-Andreu (33)	Promotes self-management of symptoms, the foundation of the therapeutic self-care system.
Nutritional follow-up	Conduct a comprehensive nutritional assessment and provide specific dietary recommendations, emphasizing the importance of adequate nutrition in postsurgical recovery.	Ravasco et al. (34)	Addresses universal self-care requirements related to nutrition and health maintenance.
Physical activity and rest	Educate on the balance between rest and gradual activity, avoiding exertion that compromises healing, and promoting early mobilization.	Krakowska et al. (35)	Reinforces the balance between activity and rest, considered a universal requirement of self-care.

Aspect	Nursing intervention	References	Relationship to Dorothea Orem's self-care model
Promotion of self-care	Empower the patient to self-manage their condition, developing skills for symptom control and strengthening autonomy during the recovery process.	Muñoz Seco et al. (36)	Consolidates self-care agency, the central pillar of Dorothea Orem's model.

Source: Author's own work.

DISCUSSION

The findings of this integrative review indicate that self-care in adult patients who have undergone thyroidectomy is a dynamic process that extends beyond immediate physical recovery. The studies analyzed show a direct relationship with the theoretical foundations of Dorothea Orem's self-care model, in which self-care is conceived as a learned, deliberate activity aimed at maintaining the individual's overall functioning. The evidence suggests that successful postsurgical recovery depends on the patient's progressive transition through the nursing system described by Orem, from a fully compensatory system during the immediate postoperative period to a support-education system (), which promotes autonomy and self-management of health (16).

Regarding the factors that influence self-care capacity, the results indicate that patients with a cancer diagnosis face additional barriers during the recovery process. Adherence to therapeutic recommendations does not depend solely on the information provided by the healthcare team but is closely linked to the patient's subjective perception of emotional well-being and quality of life (13). A deteriorated psychological state is associated with lower adherence to pharmacological treatment and self-care practices. Furthermore, the literature identifies a relevant sociocultural dimension in which gender influences attitudes toward prevention and self-care, with resistance observed in male patients because of cultural constructs of autonomy (17,18).

The effectiveness of self-care is enhanced through the implementation of structured postsurgical recovery protocols. The evidence highlights that preoperative education, adequate pain management, and early mobilization are fundamental pillars for optimizing clinical outcomes following thyroidectomy (19). A relevant aspect is the preservation of vocal function, where patients who receive specific guidance demonstrate better voice recovery and greater satisfaction with their quality of life (20).

The support education system serves as a central pillar in the patient's transition toward self-care agency. Structured educational programs improve treatment adherence and act as preventive factors against avoidable complications (21). For this education to be effective, it must be individualized, taking into account the patient's health literacy, support network, and educational level (22). Preoperative education is particularly important, as it reduces anxiety and allows the patient to acquire self-care skills prior to the surgical procedure (23,24).

Management of the cervical wound is among the primary clinical and aesthetic concerns. The reviewed studies emphasize that adherence to aseptic protocols is essential for preventing infections and dehiscences (25,26). Likewise, active monitoring for warning signs such as erythema, discharge, or persistent pain enables early detection of complications such as seromas or cervical hematomas (27).

Owing to the visible location of the surgical incision, the aesthetic component emerges as a significant determinant of quality of life. Self-care should include strategies for the prevention of hypertrophic scars, such as the use of silicone sheets and sunscreen, given their impact on patients' psychosocial adjustment (28). With respect to pain management, the literature supports the use of multimodal analgesia, which promotes faster functional recovery and greater patient involvement in the rehabilitation process (29).

Recovery after thyroidectomy is not limited to the healing of the surgical wound but involves reintegration of the patient into daily life and work. Early and progressive mobilization is essential for preventing physical and psychological sequelae associated with prolonged immobility (30). However, the subsequent psychological and voice-related impact continues to be underestimated, as changes in voice and body image can trigger anxiety or depression, affecting the patient's quality of life.

Finally, the literature emphasizes the need for nursing staff to develop competencies in therapeutic communication and the early detection of emotional disturbances. Comprehensive support must take into account the patient's work and social demands, especially in oncology cases, ensuring care that integrates both the physical and emotional dimensions of the postoperative process (31).

CONCLUSIONS

The analyzed evidence confirms that self-care is a critical determinant of the postsurgical recovery of patients undergoing thyroidectomy. These findings indicate that the implementation of structured educational strategies not only optimizes clinical outcomes, with a reduction in the incidence of hypocalcemia and infections but also facilitates the patient's transition from hospital care to greater autonomy at home, supporting the applicability of Dorothea Orem's support-education system in this clinical context.

The impact of self-care is not uniform but is conditioned by sociocultural and sex factors that influence patients' willingness to manage their health. In this sense, the preservation of vocal function and acceptance of body image emerge as priority dimensions that nursing staff must integrate into postsurgical care, moving beyond the traditional approach focused exclusively on wound healing.

Finally, to maximize patient safety, it is essential to standardize discharge protocols that incorporate preoperative education and follow-up strategies. Furthermore, future research should focus specifically on evaluating the impact of these educational interventions on reducing hospital readmissions and improving long-term outcomes, thereby strengthening the autonomous role of nursing in the field of endocrine surgery.

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AUTHORSHIP CONTRIBUTIONS

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