ESTIMA
Brazilian Journal of Enterostomal Therapy

ORIGINAL ARTICLE
https://doi.org/10.30886/estima.v24.1831_IN

Educational program for self-care training in the postoperative period for individuals with urostomy

Nádia Filipa Carvalho Pégo Marques[1]*

ABSTRACT

Objective: To describe the process of developing and validating the content of an educational program for training in urostomy self-care, based on scientific evidence, and present an initial feasibility test of its clinical application. **Method:** The program was developed based on nursing interventions identified in a scoping review and submitted for content validation to a panel of six wound, ostomy, and continence-certified nurses using the Delphi method. Subsequently, its operationalization was assessed through an exploratory feasibility test (single-case study), with data collected for process monitoring using the Urostomy Education Scale (UES). **Results:** The scoping review identified 114 nursing interventions, supporting the development of a structured educational program comprising five sessions. After its elaboration, it was submitted to a validation process, obtaining a certified nurse agreement rate of 0.8. The feasibility test demonstrated the program's operationalization and the UES's sensitivity in monitoring self-care progression (from deficit to autonomy), confirming the relevance of the intervention algorithm for situations of skills stagnation. **Conclusion:** The developed and validated educational program is a relevant tool for systematizing clinical practice. The feasibility test demonstrated its potential in promoting patient autonomy and monitoring the training process.

KEYWORDS: Enterostomal Therapy. Self-care. Nurses. Postoperative period. Patient education. Urostomy.

Programa educativo para a capacitação do autocuidado no pós-operatório da pessoa com urostomia

RESUMO

Objetivo: Descrever o processo de desenvolvimento e validação do conteúdo de um programa educativo de capacitação para o autocuidado à urostomia, fundamentado em evidência científica, e apresentar um teste de viabilidade inicial da sua aplicação clínica. **Método:** O programa foi desenvolvido com base em intervenções de enfermagem identificadas em uma revisão de escopo e submetido à validação de conteúdo por um painel de seis enfermeiros peritos em estomaterapia, utilizando o método Delphi. Posteriormente, sua operacionalização foi avaliada por meio de um teste de viabilidade exploratório (estudo de caso único), com dados recolhidos para fins de monitorização de processo de acordo com a *Urostomy Education Scale* (UES). **Resultados:** A revisão de escopo mapeou 114 intervenções de enfermagem, sustentando o desenvolvimento de um programa educativo estruturado, composto por cinco sessões. Após elaboração, foi submetido a um processo de validação, obtendo uma taxa de concordância dos peritos de 0,8. O teste de viabilidade demonstrou

[1]Hospital de São Bernardo, Local Health Unit of Arrábida – Setúbal, Portugal.
*Corresponding author: nadiapego@hotmail.com

Section Editor: Manuela de Mendonça F. Coelho
Received: August 14, 2025 | Accepted: December 8, 2025
How to cite: Marques NFCP. *Programa educativo para a capacitação do autocuidado no pós-operatório da pessoa com urostomia* (Educational program for self-care training in the postoperative period for individuals with urostomy). ESTIMA, Braz. J. Enterostomal Ther., São Paulo, v24, e1831, 2026. https://doi.org/10.30886/estima.v24.1831_IN
Origin of the article: Project developed during the Master's degree in Nursing, specializing in Medical-Surgical Nursing, with a focus on Oncological Nursing Intervention, at the *Escola Superior de Enfermagem de Lisboa*, in 2022.

a operacionalização do programa e a sensibilidade da UES em monitorizar a progressão do autocuidado (do déficit à autonomia), confirmando a pertinência do algoritmo de intervenção para situações de estagnação de competências. **Conclusão:** O programa educativo desenvolvido e validado é uma ferramenta relevante para sistematizar a prática clínica. O teste de viabilidade demonstrou o seu potencial na promoção da autonomia do paciente e na monitorização do processo de capacitação.

DESCRITORES: Estomaterapia. Autocuidado. Enfermeiros. Período pós-operatório. Educação do paciente. Urostomia.

Desarrollo y validación de un programa educativo para la capacitación en autocuidado durante el postoperatorio de personas con urostomías

RESUMEN

Objetivo: Describir el proceso de desarrollo y validación del contenido de un programa educativo de capacitación para el autocuidado de urostomías, fundamentado en evidencia científica, además de presentar una prueba de viabilidad inicial de su aplicación clínica. **Método:** El programa se desarrolló a partir de intervenciones de Enfermería identificadas en una revisión de alcance (*scoping review*) y se sometió a validación de contenido a cargo de un panel de seis enfermeros expertos en estomaterapia, utilizando el método Delphi. Posteriormente, se evaluó su operacionalización a través de una prueba de viabilidad exploratoria (estudio de caso único), con datos recopilados para fines de monitorización del proceso mediante la *Urostomy Education Scale* (UES). **Resultados:** La revisión de alcance mapeó 114 intervenciones de Enfermería, sustentando el desarrollo de un programa educativo estructurado compuesto por cinco sesiones. Después de su elaboración, se lo sometió a un proceso de validación, obteniendo una tasa de concordancia de los expertos de 0,8. La prueba de viabilidad demostró la operacionalización del programa y la sensibilidad de la escala UES para monitorizar el progreso del autocuidado (de déficit a autonomía), confirmando la pertinencia del algoritmo de intervención para situaciones de estancamiento de competencias. **Conclusión:** El programa educativo que se desarrolló y validó es una herramienta relevante para sistematizar la práctica clínica. La prueba de viabilidad demostró su potencial para promover la autonomía del paciente y monitorizar el proceso de capacitación.

DESCRIPTORES: Estomaterapia. Autocuidado. Enfermeros. Periodo postoperatorio. Educación del paciente. Urostomía.

INTRODUCTION

Bladder cancer ranks ninth in the study of worldwide cancer incidence[1]. In Portugal, in 2020, 52,723 new cases emerged, with a higher incidence in males, with 24 cases per 1 million inhabitants[2]. The most common treatment for muscle-invading bladder carcinoma is radical cystectomy with urostomy construction, allowing for longer survival, but with the challenge of adapting to the stoma, which represents a significant change and a negative impact on the person's life[3,4]. This impact can be physical, psychological, and social, including altered self-image, body alienation, and interference with leisure activities[5,6]. Thus, adapting to a new life with an ostomy is a challenging process that requires significant lifestyle changes and adjustments to the individual's social roles; nurses, in turn, play a crucial role in this process, helping patients manage the emotions related to the construction of the ostomy and promoting self-care[7].

The teaching and training process for self-care should begin early, in the preoperative period, in a private and welcoming environment, allowing the individual to discuss any doubts or fears[3]. In the postoperative period, the training process should continue as soon as the person meets the necessary conditions for learning, particularly the control of variables such as fear, anxiety, fatigue, nausea, and pain, which can interfere with the motivation to learn[8]. Structured, evidence-based educational programs with defined objectives that integrate theoretical teaching and practical training have been shown to effectively prepare individuals and/or caregivers for the safe management of self-care. This type of approach helps reduce variability in healthcare

professionals' practice, increases the likelihood of achieving independence in self-care, and promotes a safe transition to home, associated with a decrease in the incidence of complications and hospital readmissions[9,10]. According to the Wound Ostomy and Continence Nurses Society, in the context of hospitalization, teaching should focus on the emptying and replacement of the pouching system[11], skills that should be assessed using a validated tool such as the Urostomy Education Scale (UES)[10]. Despite the recognition of these guidelines, the gap in the literature regarding specific and standardized educational programs for urostomy, based on robust evidence, motivated the present study. The need to systematize nursing interventions and ensure consistent and monitored care justifies the development of a structured tool, such as the one presented in this manuscript.

OBJECTIVES

The main objective of this article is to describe the process of developing and validating the content of an educational program for training in urostomy self-care, based on scientific evidence, and to present the exploratory results of the feasibility test of its clinical application.

METHODS

This manuscript describes the methodological study of the development and validation of an educational program for training in urostomy self-care, complemented by an exploratory feasibility test of its clinical operationalization. The study was conducted in two main phases, namely, the development and validation of the educational program; and feasibility and operationalization testing.

Content development and validation

The first phase consisted of developing the educational program, based on scientific evidence, and the subsequent validation of its content.

Program development

The development began with a scoping review, conducted in August 2020, in the Medical Literature Analysis and Retrieval System Online (MEDLINE) and Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases, using the descriptors "*urostomia*" (urostomy), "*autocuidado*" (self-care), "*enfermagem*" (nursing), "*pós-operatório*" (postoperative), and "*doença oncológica*" (oncological disease). The research protocol followed the guidelines of the Joanna Briggs Institute, encompassing studies published between 2005 and August 2020 that met the inclusion criteria: adults undergoing urostomy for oncological disease (population), nursing interventions to promote self-care (concept), and the postoperative period (context).

The objective was to map the nursing interventions necessary to promote self-care in the postoperative period of individuals with urostomy due to oncological disease[8].

Content validation

The preliminary version of the program was submitted for content validation to a panel of six wound, ostomy, and continence-certified nurses, selected for convenience[8]. Eligibility criteria included voluntary participation and a minimum of five years of experience in the field, which allowed for the assembly of a panel with an average of 15 years of clinical experience[8]. The Delphi method was used in the validation process, with two rounds of assessment conducted using a structured grid with a 4-point Likert scale (strongly disagree to strongly agree) and space for qualitative suggestions[8]. The consensus analysis was performed using the Content Validity Index (CVI) method, calculating the proportion of agreement among certified nurses and considering a consensus of acceptance of an item for a CVI greater than 0.8[8].

Feasibility and operationalization test (single case study)

The final version of the educational program was subsequently subjected to a feasibility and operationalization test through a single case study, as described in an institutional report[8]. The program was implemented, and data collected by UES were assessed in terms of the quality of the implementation process and internal audit of the new educational program at the institution, rather than as formal clinical research[8].

Ethical considerations

The methodological study respected ethical principles, ensuring informed consent and voluntary participation in the study by certified nurses[8].

For the feasibility and operationalization testing phase (single-case study), anonymous data collection, using the UES, was conducted as part of the intervention's process and quality audit. Since this is not a formal clinical investigation aimed at testing efficacy, but rather the monitoring of a quality improvement process, its inclusion in the manuscript was considered a proof of concept that did not require formal submission to the Ethics Committee.

RESULTS

The results are presented in three subsections, corresponding to the methodological phases of the study: the interventions mapped in the scoping review, the results of the content validation using the Delphi method, and the findings of the feasibility test.

Scope review interventions

The scoping review identified and analyzed 114 nursing interventions, which were grouped into 5 thematic categories:

1. Teaching technical skills;
2. Emotional support;
3. Education about complications;
4. Guidance on support resources; and
5. Reinforcement of continuity of care.

These categories provided the evidence base that supported the development of the first version of the "Educational program for self-care training in the postoperative period for individuals with urostomy"[8].

The program was structured into five sequential educational sessions, initiated in the immediate postoperative period, each lasting approximately 1 hour[8]. The sessions cover the demonstration and supervised practice of self-care skills, the involvement of the significant other in the process, and discharge planning[8].

Content validation results (Delphi)

The developed educational program was submitted to a content validation process by a panel of six wound, ostomy, and continence-certified nurses. The validation was completed after two Delphi rounds, achieving consensus on all assessed items. The CVI analysis revealed a final overall agreement rate greater than 0.8[8]. The process resulted in improvements to the educational program, while maintaining the five daily education sessions structured and with defined objectives — which can be consulted in Chart 1[8], which includes a "Nursing Intervention Algorithm: self-care assessment" (NIA) used to adjust interventions and ensure the evolution of self-care when it is verified, through the application of the UES, that the person does not evolve in any of the assessed stages[8].

Chart 1. Educational sessions and nursing interventions for urostomy self-care.

Education session	Objectives	Nursing interventions
1st session	1. To understand the urostomy and its function; 2. To become familiar with urostomy medical devices (skin barrier and pouch); 3. To review the informational brochure "Urostomy"; 4. To understand the normal characteristics of urine; 5. To observe stoma and peristomal skin care.	1. Guide the patient to the education session; 2. Provide devices; 3. Provide reading materials; 4. Teach about elimination ostomy; 5. Provide health education; 6. Teach about ostomy self-care devices; 7. Instruct on ostomy self-care; 8. Monitor the stoma; 9. Monitor the peristomal skin; 10. Encourage the patient to ask questions.
2nd session	1. Identify and gather the devices and materials required for stoma and peristomal skin care; 2. Identify the steps involved in stoma and peristomal skin care; 3. Observe stoma and peristomal skin care; 4. Become familiar with the main complications (peristomal skin alterations and urinary tract infection) and the main prevention strategies.	1. Guide the patient to the education session; 2. Assist the patient in gathering the materials required for stoma and peristomal skin care; 3. Teach about complications; 4. Teach about diet; 5. Instruct on ostomy self-care; 6. Monitor the peristomal skin; 7. Monitor the stoma; 8. Encourage the patient to ask questions; 9. Assess elimination ostomy self-care using the UES.
3rd session	That the patient can: Identify and gather the devices and materials required for stoma and peristomal skin care; Identify the steps involved in stoma and peristomal skin care; Perform stoma and peristomal skin self-care with assistance from the nurse; Identify difficulties experienced in self-care.	1. Guide the patient to the education session; 2. Encourage assessment of the stoma, peristomal skin, and urinary elimination; 3. Train the patient in ostomy self-care; 4. Reinforce the importance of skin care, proper cutting, and appropriate fitting of ostomy devices in preventing skin maceration; 5. Encourage the patient to ask questions; 6. Assess elimination ostomy self-care using the UES; 7. Implement the "NIA: Urostomy Self-Care Assessment".
4th session	That the patient can: 1. Perform stoma and peristomal skin self-care independently; 2. Identify difficulties experienced in self-care.	1. Guide the patient to the education session; 2. Encourage assessment of the stoma, peristomal skin, and urinary elimination; 3. Train the patient in ostomy self-care; 4. Encourage the patient to ask questions; 5. Assess elimination ostomy self-care using the SES; 6. Implement "NIA: Urostomy Self-Care Assessment".
5ª sessão	That the patient can: Perform stoma and peristomal skin self-care; Instruct the significant other on stoma and peristomal skin care; Identify available resources in the community. That the significant other is able to: Identify the steps involved in stoma and peristomal skin care; Identify available resources in the community.	1. Guide the people to the education session; 2. Train the patient in ostomy self-care; 3. Assess elimination ostomy self-care using the UES; 4. Encourage the patient and the significant other to ask questions; 5. Teach about community resources.

Feasibility test and operational demonstration

The validated program was applied in a clinical setting to a person with a postoperative urostomy, demonstrating the program's operationalization and its relevance in promoting autonomy, especially in replacing the pouching system and emptying urine[8].

The UES, which is part of the program, was used to monitor the person's progress during the process of acquiring self-care skills[8].

The scale was applied daily by the same nurse, starting from the second educational session, allowing for the assessment of 7 domains of self-care:

1. Stoma reaction;
2. Removal of the the pouching system;
3. Measurement of the stoma diameter;

4. Adjustment of the skin barrier cutout size;
5. Skin care;
6. Adaptation of the new skin barrier; and
7. Emptying the pouching system and attaching/detaching the nighttime drainage bag[8].

This continuous assessment made it possible to accurately identify the acquisition of skills as well as the specific difficulties encountered, enabling a rapid and individualized intervention. It was evident that the patient accepted the urostomy and developed skills in removing the pouching system, measuring the stoma size, cutting the skin barrier, emptying the urostomy pouch, and adapting to the nighttime drainage bag. However, the patient continued to require verbal guidance to ensure adequate cleaning of the peristomal skin and assistance with the application of the skin barrier[8]. Given the stagnation in scores for competencies related to peristomal skin care and skin barrier application (domains 5 and 6), the nursing team resorted to the NIA[8]. The application of this tool directed training toward the most challenging stages of self-care, anticipated the post-discharge enterostomal therapy consultation, and involved the significant other in the replacement of the skin barrier[8]. Thus, although the person needed help changing the skin barrier (performed every three days), they maintained autonomy in the remaining care of their urostomy[8].

DISCUSSION

This study achieved its objective by describing the development and validation of a structured educational program for individuals with urostomies, complemented by an initial feasibility test of its clinical operationalization.

The educational program was designed in light of Dorothea Orem's Self-Care Deficit Theory[8]. This theoretical framework positions the program as a (partially compensatory) nursing care system that aims to empower the individual to meet their universal self-care and health deviation requirements, which are compromised by the urostomy[12].

The results of the feasibility test, although exploratory in scope, demonstrated that the program constitutes a useful and important tool in promoting autonomy, especially with regard to emptying and replacing the pouching system. These are the key skills to be developed during hospitalization, which aligns with recommendations from international organizations such as the Wound, Ostomy and Continence Nurses Society (WOCN), as cited by the Registered Nurses Association of Ontario (RNAO)[11].

The inclusion of the UES in the program proved crucial for monitoring the skills acquisition process and for accurately identifying difficulties. This finding justifies the need for self-care to be assessed and recorded using a validated tool, allowing for rapid and focused intervention in the most critical areas.

Although the trained individual had not achieved complete autonomy in changing the skin barrier, at the time of discharge, they showed significant progress in acquiring the remaining skills. The use of the NIA, in the face of stagnation in skills related to skin care and skin barrier application, allowed the nursing team to intervene in a personalized way. This intervention focused on training for the most challenging steps and involving the significant other only in assisting with the skin barrier change, preserving the autonomy acquired in the other aspects of urostomy care.

In all sessions of the program, the time allotted for questions proved relevant for the development of ideas and the addressing of concerns of a delicate or intimate nature. This reinforces the idea that the supportive and trusting relationship established throughout the educational process, combined with a private and welcoming environment, fosters both the expression of fears and the emotional management of the patient[3,7].

Given its structure and content validation, the educational program is considered to be aligned with evidence pointing to the effectiveness of structured interventions in the perioperative period, which contribute to improving confidence, developing self-care skills for the ostomy, and ensuring the safety of the patient and/or caregiver at home[9,10].

Study limitations

Despite promising results in the development and validation phases, the main limitation of this work lies in its exploratory scope. The subsequent feasibility test was limited to a single case study, justified by external factors and its execution

under a quality audit regime, without the intention of formally testing clinical efficacy. Consequently, the data obtained cannot be generalized and should be interpreted with caution, which limits the assessment of the program's impact on health.

Recommendations

Considering the methodological robustness of the program and the positive impact demonstrated in the feasibility test, it is recommended that controlled and randomized clinical trials with larger and more diverse samples be conducted. These studies, duly submitted to and approved by Ethics Committees, are essential to assess the program's impact in different healthcare settings and to confirm its clinical efficacy in promoting autonomy and improving long-term health outcomes.

CONCLUSION

This study achieved its objective by describing the development and content validation of a structured educational program for empowering individuals with urostomy self-care. The content validation, consolidated by the rigor of the Delphi method, unequivocally confirmed the relevance and clinical utility of the program, providing it with a robust and reliable methodological foundation. In parallel, the exploratory feasibility testing phase proved fundamental in verifying the program's functionality in a clinical setting. The effectiveness of the incorporated tools was notable: the UES demonstrated a marked sensitivity in monitoring the progression of skills, while the NIA proved to be an indispensable guide in supporting clinical decision-making during moments of learning stagnation. In summary, the educational program emerges as a valuable tool for systematizing specialized nursing care, with significant potential for promoting patient autonomy. However, its long-term impact lacks confirmation based on formal efficacy studies, such as controlled clinical trials.

Acknowledgments: I thank the certified nurses who participated in the validation of this educational program, providing important contributions that improved its content, ensuring its applicability to individuals with urostomies.
Author's contribution: NFCPM: Project management, Formal analysis, Conceptualization, Data curation, Writing – first draft, Writing – revision and editing, Research, Methodology, Resources, Supervision, Validation, Visualization.
Availability of research data: All data were generated or analyzed in the present study.
Funding: Not applicable.
Conflict of interest: No record found.

REFERENCES

1. International Agency for Research on Cancer. Global cancer observatory [Internet]. [quoted in March 31, 2025]. Lyon: IARC. Available in: https://gco.iarc.fr/
2. Instituto Português de Oncologia do Porto Francisco Gentil. Registo Oncológico Nacional de Todos os Tumores na População Residente em Portugal, em 2020 [Internet]. Porto: Instituto Português de Oncologia do Porto Francisco Gentil; 2023. [quoted in March 31, 2025]. Available in: https://ron.min-saude.pt/media/2223/ron-2020.pdf
3. Soares-Pinto IE, Queirós SMM, Alves PJP, Carvalho TMS, Santos CSVB, Brito MAC. Nursing interventions to promote self-care in a candidate for a bowel elimination ostomy: scoping review. Aquichan. 2022;22(1):e2212. https://doi.org/10.5294/aqui.2022.22.1.2
4. Instituto Nacional de Câncer. Câncer de bexiga: versão para profissionais de saúde [Internet]. Brasília: INCA; 2023 [quoted in March 31, 2025]. Available in: https://www.gov.br/inca/pt-br/assuntos/cancer/tipos/bexiga/versao-para-profissionais-de-saude
5. Pereira VP, Vieira SMF, Oliveira GD, Alves CA, Araújo AM. Impacto psicossocial da estomia no cotidiano do indivíduo ostomizado. In: Anais do Congresso Brasileiro de Estomaterapia – SOBEST; 2023 Out 21-25; Natal, Brasil [Internet]. 2023 [quoted in August 10, 2025]. Available in: https://anais.sobest.com.br/cbe/article/view/539/424

6. Brown F. Psychosocial health following stoma formation: a literature review. Gastrointest Nurs. 2017;15(3):43-9. https://doi.org/10.12968/gasn.2017.15.3.43

7. Cruz DJS, Melo TFC, Paiva ICS. O doente com estomia de eliminação: papel do enfermeiro na transição. Repositório Científico da Escola Superior de Enfermagem de Coimbra [Internet]. 2020 [quoted in August 10, 2025]. Available in: https://www.rcaap.pt/detail.jsp?id=oai:repositorio.esenfc.pt:10437&locale=pt

8. Marques NFCP. Capacitação para o autocuidado no pós-operatório da pessoa com urestomia [dissertação de mestrado]. Lisboa: Escola Superior de Enfermagem de Lisboa; 2022.

9. Heneghan C, Reznick RK, Louridas M, Dubrowski A, Grocott P, Habr-Gama A, et al. The ostomy home skills kit: 10 years of improving the quality of post-discharge patient care through simulation. Bull Am Coll Surg. 2021;106(2):14-22.

10. Kristensen SA, Laustsen S, Kiesbye B, Jensen BT. The urostomy education scale: a reliable and valid tool to assess urostomy self-care skills among cystectomy patients. J Wound Ostomy Continence Nurs. 2013;40(7):611-7. https://doi.org/10.1097/01.WON.0000436778.39349.12

11. Supporting adults who anticipate or live with an ostomy. Toronto: Registered Nurses' Association of Ontario; 2019.

12. Orem DE. Nursing concepts of practice. 6th ed. St. Louis: Mosby; 2001.