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RESEARCH ARTICLE (ORIGINAL)

Patient Satisfaction with Nursing Consultations for Enteral Feeding Care: A Cross-Sectional Study in a Hospital Setting

Satisfação com a Consulta de Enfermagem de Ostomias de Alimentação: Um Estudo Transversal em Contexto Hospitalar

Satisfacción de los Pacientes con la Consulta de Enfermería de Ostomías de Alimentación: Un Estudio Transversal en un Entorno Hospitalario

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Abstract

Background: Nursing consultations for enteral feeding care are pivotal for the technical, educational, and emotional follow-up of patients, directly influencing safety, autonomy and the overall experience of patients and caregivers. The evaluation of satisfaction allows the identification of areas for improvement.
Objective: To evaluate patient satisfaction with nursing consultations for enteral feeding care in hospital settings.
Methodology: An observational, cross-sectional, and exploratory study was conducted at a hospital in Northern Portugal, between July and September 2024, comprising 31 participants. Data were collected in person, using a sociodemographic questionnaire and the SUCEH21 scale. Statistical analysis included measures of central tendency, variability, and non-parametric tests (chi-square). The study was approved by the institutional Ethics Committee.
Results: Overall satisfaction was high (2.87), particularly regarding technical competence, interpersonal relationships, and humanized care. The dimensions of Readiness to assist and Promotion of care continuity indicated room for improvement.
Conclusion: Nursing consultations for enteral feeding care were positively evaluated, reinforcing the need for integrated strategies of education, structured follow-up, and coordination between hospital and community settings.

Keywords: patient satisfaction; office nursing; gastrostomy; nursing care

Resumo

Enquadramento: A consulta de enfermagem de ostomias de alimentação é central no acompanhamento técnico, educativo e emocional de pessoas com gastrostomia, influenciando a segurança, autonomia e experiência dos utentes/cuidadores. A avaliação da satisfação permite identificar áreas de melhoria nos processos.
Objetivo: Avaliar a satisfação dos utentes com a consulta de enfermagem de ostomias de alimentação em contexto hospitalar.
Metodologia: Estudo observacional, transversal e exploratório, realizado num hospital do norte de Portugal entre julho e setembro de 2024, com 31 participantes e a aprovação da Comissão de Ética Institucional. A colheita de dados foi presencial, com questionário sociodemográfico e a escala SUCEH21. A análise estatística incluiu medidas de tendência central, variabilidade e testes não paramétricos (qui-quadrado).
Resultados: Observou-se elevada satisfação total (2,87), destacando-se as competências técnicas, a relação interpessoal e humanização dos cuidados. As dimensões Prontidão na assistência e Promoção da continuidade de cuidados evidenciaram margem de melhoria.
Conclusão: A consulta é valorizada, reforçando-se a necessidade de estratégias integradas de educação, seguimento estruturado e articulação entre o hospital e a comunidade.

Palavras-chave: satisfação do paciente; enfermagem ambulatorial; gastrostomia; cuidados de enfermagem

Resumen

Marco contextual: La consulta de enfermería especializada en ostomías de alimentación es fundamental para el seguimiento técnico, educativo y emocional de las personas sometidas a gastrostomía, ya que influye en la seguridad, la autonomía y la experiencia de los usuarios/cuidadores. Como componente esencial del ciclo de calidad, evaluar la satisfacción permite identificar áreas de mejora en los procesos.
Objetivo: Evaluar la satisfacción de los usuarios con la consulta de enfermería de ostomías de alimentación en un contexto hospitalario.
Metodología: Estudio observacional, transversal, y de carácter exploratorio, realizado en un hospital del norte de Portugal entre julio y septiembre de 2024, con 31 participantes (pacientes y cuidadores). Recopilación de datos presencial, mediante un cuestionario sociodemográfico y la escala SUCEH21. El análisis estadístico incluyó medidas de tendencia central, variabilidad y pruebas no paramétricas (chi-cuadrado). El estudio obtuvo la aprobación de la Comisión de Ética Institucional.
Resultados: Elevada satisfacción global (2,87), destacan las competencias técnicas, la relación interpersonal y la humanización. La rapidez en la asistencia y la continuidad de los cuidados mostraron margen de mejora.
Conclusión: Se valora la consulta. Los resultados refuerzan la necesidad de estrategias integradas de educación, seguimiento estructurado y coordinación entre el hospital y la comunidad.

Palabras clave: satisfacción del paciente; enfermería de consulta; gastrostomía; atención de enfermería

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Introduction

Percutaneous endoscopic gastrostomy (PEG) is an alternative to surgical gastrostomy for patients requiring long-term enteral feeding (Asokkumar et al., 2024). PEG is widely used as a standard method for long-term enteral nutrition in patients with impaired oral intake due to conditions such as neurological disorders, malignancy, or general debility (Folwarski et al., 2022). Associated with neurological, oncological or general debility conditions, this therapeutic intervention, aimed at ensuring safe and sustained nutrition, entails not only clinical challenges and the need for patient support, but also psychological, emotional and economic burdens, with a significant impact on the quality of life of both patients and caregivers (Celik et al., 2025; Tran et al., 2025).
The contemporary healthcare approach to patients with feeding tubes, promoted by the American Gastroenterological Association, is focused on the involvement of multidisciplinary teams, which provide emotional support and structured education to patients and caregivers, thus avoiding complications and promoting social adaptation (Micic et al., 2025).
In this sense, specialized nursing follow-up plays a pivotal role in promoting self-care skills, supporting psychosocial adaptation, and enhancing quality of life among individuals living with an ostomy (Heydari et al., 2023). The intervention of nurses with advanced skills in stomatherapy is particularly relevant, as it ensures care continuity from the preoperative period to the post-discharge period, reducing the probability of skin and mechanical complications (Panattoni et al., 2023).
The implementation of educational programs that integrate anticipatory guidance, telephone support in the first weeks, and facilitated access to the nursing team are also associated with higher satisfaction rates and lower complication rates (Fraser et al., 2023; Suluhan et al., 2020). The prevention of complications, characterized by a set of relevant measures and actions to reduce the need for hospital-based care, is decisive for patients' comfort and quality of life, directly influencing their satisfaction (Townley et al., 2018). The literature shows that emotional support, easy access to the team, and adequate education are critical factors for a positive experience (Celik et al., 2025).
In this context, the assessment of patient satisfaction is a central tool in the quality cycle, guiding continuous improvement interventions and strengthening evidence-based practice.

Background

Nursing consultations for enteral feeding care are structured interventions aimed at supporting patients throughout the adaptation process, from self-care education to the prevention of complications and the promotion of care continuity (Machado et al., 2022). Their objectives are to facilitate adaptation to the new health condition, promote patient autonomy, and support formal and informal caregivers during the transition from hospital to community care, in line with principles of continuity of care and patient-centred nursing practice (Bento & Martins, 2024; Direção-Geral da Saúde, 2016). Their effectiveness should be evaluated through patients' experiences, which are widely recognized as a key indicator of the quality of healthcare delivery and a fundamental component of care evaluation frameworks (Alhussin et al., 2024).
Recent studies have shown that satisfaction with nursing care is closely associated with person-centred care, effective therapeutic relationships, and the ability of healthcare professionals to respond to patients' individual needs and expectations (Araújo et al., 2025; Goes et al., 2023). Additionally, the literature highlights the role of nursing consultations in improving patients' and caregivers' knowledge and self-management skills, thereby contributing to the prevention of complications associated with enteral feeding tubes (Kahveci & Akin, 2021; Celik et al., 2025). Home-based care has been gaining relevance among patients and caregivers, especially in cases where mobility is reduced or functional dependence is high. Previous studies have shown that home-based and hybrid care models are associated with high levels of patient satisfaction, perceived safety, and continuity of care, while reducing the burden associated with hospital attendance (Cominardi et al., 2022; Maniaci et al., 2022).
Despite the growing relevance of the theme, the literature has gaps, namely: (i) scarcity of national studies on satisfaction with nursing consultations for enteral feeding care; (ii) lack of comparative data between different participant profiles (patients vs. caregivers); (iii) limited assessment of the dimensions of Readiness to assist and Promotion of care continuity; (iv) insufficient data on the experience of informal caregivers.
The present study aims to address these gaps by exploring participants' satisfaction with nursing consultations and identifying priority areas for improving the quality of care provided.
This evaluation can support organizational decision-making and promote healthcare models closer to the real needs of patients and families.

Research question/hypotheses

What is the level of patient satisfaction with nursing consultations for enteral feeding care in hospital settings? ; H1: The participant profile influences overall satisfaction; H2: Place of residence affects the perception of the dimension Promotion of care continuity; H3: Complications with the feeding tube are associated with lower satisfaction in the dimensions Readiness to assist and Promotion of care continuity; H4: The preference for home-based consultations is related to the degree of functional dependence.

Methodology

The present study adopted an observational, cross-sectional, and exploratory design. It was conducted in a hospital in the Northern Portugal between July and September 2024.

The target population consisted of patients being followed up in nursing consultations for enteral feeding care in hospital settings. In cases of cognitive or functional limitation, the questionnaires were completed by formal or informal caregivers. The decision for caregivers to complete the questionnaire was based on cognitive or functional limitations recorded in the patient's clinical file. These limitations were associated with an inability to understand and respond to the instrument autonomously, as evaluated by the nursing team during the consultation. Criteria such as documented cognitive impairment, high functional dependence for self-care, and inability to communicate effectively were considered.

A convenience sample was used, comprising all eligible and available patients during the data collection period (July to September 2024), resulting in a total of 31 participants with complete questionnaires. Inclusion criteria were active follow-up in nursing consultations for enteral feeding care and provision of informed consent. Participants unable to respond and not accompanied by a caregiver were excluded. The use of non-probabilistic sampling is justified by the exploratory nature of the study and the limited number of patients with enteral feeding tubes in regular follow-up. Prior to data collection, the questionnaire was pilot tested in three cases to assess linguistic clarity and adequacy. This pilot testing did not result in any modifications to the instrument or influence the study design.

Data were collected in person during the six-month follow-up consultation following the placement of the feeding tube. A structured questionnaire was administered, comprising: (i) the sociodemographic and clinical characterization of the participants, and (ii) the Scale of Satisfaction of Users with Nursing Care (SUCEH21). SUCEH21 evaluates six dimensions on a three-point Likert scale: Communication effectiveness (three items), Information usefulness (five items), Assistance quality (five items), Readiness to assist (two items), Therapeutic environment maintenance (four items) and Promotion of care continuity (two items). These dimensions assess core aspects of satisfaction with nursing care, as defined by Ribeiro (2005). The scale is validated for the Portuguese population and demonstrates robust psychometric properties (α = 0.92 in the original validation).

In the present study, the obtained Cronbach's alpha coefficient was 0.94, confirming the excellent internal consistency.

The questionnaire was self-administered, voluntary, and conducted online. To minimize external influence and ensure the seamless flow of clinical care, participants completed the questionnaire after their consultations, without supervision by the healthcare team. Despite these measures, the potential for social desirability bias is acknowledged, as the nurses providing the consultation were also involved in the administration process. Anonymity and confidentiality were strictly maintained. To mitigate selection bias, the entire eligible population within the defined period was included. Data analysis was performed by a researcher external to the enteral nutrition nursing team, using participant profiles (patient, formal caregiver, or informal caregiver) to identify potential variations in perception.

Data were analyzed using IBM SPSS Statistics™ software (version 29.0). Continuous variables were expressed as measures of central tendency and variability, including mean, median, standard deviation, and interquartile range. Categorical variables were described using absolute and relative frequencies. To assess associations between variables, Pearson's chi-square test, the likelihood ratio, and the Fisher-Freeman-Halton test were employed, with statistical significance set at $p < 0.05$. The study adhered to all ethical and legal principles and received a favorable opinion from the institutional Ethics Committee (051/CES/JAS).

Results

The study included 31 participants, comprising patients attending nursing consultations for enteral feeding care and their respective primary caregivers. Most of the sample consisted of informal caregivers (64.5%; n = 20), followed by formal caregivers (22.6%; n = 7), and the patients (12.9%; n = 4).

The sociodemographic characterization of the sample is detailed in Table 1.

Table 1

Demographic characterization of the sample (n = 31)

	N	%
Who answers?		
Formal caregiver	7	22.6
Informal caregiver	20	64.5
Patient	4	12.9
Gender		
Female	13	41.9
Male	18	58.1
Place of Residence		
Family members' house	4	12.9
Patient's house	11	35.5
Institution (Nursing Homes, Long-term Care Unit, Other)	16	51.6
Marital status		
Married/*De facto* union	11	35.5
Divorced/Separated	3	9.7
Single	9	29.0
Widow(er)	8	25.8
Employment status		
Active	3	9.7
Not active	28	90.3
Referral for the consultation		
At the patient's request	1	3.2
Primary healthcare	5	16.1
Inpatient ward	15	48.4
Other specialty	10	32.3
Caregivers		
Formal caregiver	2	6.5
Informal caregiver	12	38.7
Institution	15	48.4
Not applicable/independent	2	6.5

Note. N = Absolute frequence; % = Percentage; Percentages may not add up to 100% due to rounding.

Satisfaction with nursing consultations

Overall satisfaction with nursing consultations for enteral feeding care was high in all dimensions, as shown in Table 2. The six dimensions of the SUCEH21 scale showed high mean values, especially in the dimensions Communication effectiveness (M = 2.98; SD = 0.04) and Assistance quality (M = 2.97; SD = 0.09). The dimension Promotion of care continuity was the one with the lowest mean score (M = 2.59; SD = 0.60), with a confidence interval between 2.36 and 2.82.

Table 2

Index of patient satisfaction with hospital nursing care (SUCEH21)

Dimensions	Mean	*SD*	Lower CI95%	Upper CI95%
Communication Effectiveness	2.98	0.04	2.96	3.00
Information usefulness	2.94	0.09	2.90	2.98
Assistance quality	2.97	0.09	2.92	3.00
Readiness to assist	2.67	0.56	2.49	2.85
Therapeutic Environment Maintenance	2.95	0.18	2.89	3.00
Promotion of Care Continuity	2.59	0.60	2.36	2.82
Overall satisfaction	2.87	0.18	2.81	2.93

Note. SUCEH21 = Scale of Satisfaction of Users with Nursing Care; *SD* = Standard deviation; CI = Confidence Interval.

Association tests and tested hypotheses

H1 –Participant profile vs. overall satisfaction: No statistically significant differences were observed (H (2) = 0.48, p = 0.785).

H2 – Place of residence vs. care continuity: Satisfaction with the dimension Promotion of care continuity was compared between participants living at home and those residing in institutional settings. No statistically significant differences were found (U = 96.0, p = 0.417).

H3 – Clinical complications vs. satisfaction: Overall, 32.3% (n = 10) of participants reported complications related to the feeding tube. No statistically significant differences were found between participants with and without complications in the dimensions Readiness to assist (U = 108.5, p = 0.593) and Promotion of care continuity (U = 101.0, p = 0.471).

H4 – Preference for home-based consultations: Of the 28 participants who expressed a preference regarding the ideal consultation setting, 67.9% (n = 19) preferred home-based consultations. This preference was significantly associated with the type of participant - χ^2 (2, N = 28) = 10.19, p = 0.006. All formal caregivers (n = 7, 100%) reported this preference, in contrast to independent patients (n = 3, 0%).

Table 3

Median and range of SUCEH21 scale dimensions by participant profile

Participant profile	Overall Satisfaction	Satisfaction with Communication Effectiveness	Satisfaction with Information usefulness	Satisfaction with Assistance quality	Satisfaction with Readiness to assist	Satisfaction with Therapeutic Environment Maintenance	Satisfaction with Promotion of Care Continuity
Formal caregiver: Median (min-max)	2.95(2.30-3.00)	3.00 (2.30-3.00)	3.00 (2.00-3.00)	3.00 (2.60-3.00)	3.00(1.50-3.00)	3.00 (2.30-3.00)	3.00 (1.50-3.00)
Informal caregiver: Median (min-max)	3.00 (2.70-3.00)	3.00 (3.00-3.00)	3.00 (2.60-3.00)	3.00 (2.80-3.00)	3.00 (0.00-3.00)	3.00 (3.00-3.00)	3.00 (1.50-3.00)
Patient: Median (min-max)	2.86 (2.70-3.00)	3.00 (3.00-3.00)	3.00 (2.80-3.00)	3.00 (3.00-3.00)	2.75 (1.50-3.00)	3.00 (3.00-3.00)	2.75 (0.00-3.00)

Note. SUCEH21 = Scale of Satisfaction of Users with Nursing Care.

The analysis by participant profile (formal caregiver, informal caregiver, or patient) revealed high and consistent levels of satisfaction in all SUCEH21 dimensions. As shown in Table 3, the medians were close to the maximum value (three points) of the scale in almost all dimensions, with minimal variations. Informal caregivers showed more homogeneous values, while formal caregivers showed slight oscillations, particularly in the dimension Promotion of care continuity. Independent patients showed greater variability, with the lowest median recorded in the same dimension (2.75; range from 0.00 to 3.00). Even so, no statistically significant differences were observed

between the groups, which suggests an overall positive evaluation of the consultation by all participant profiles.

Discussion

The results of the present study indicate a high level of satisfaction with nursing consultations for enteral feeding care across the participant groups, with consistently high scores in the dimensions assessed. These findings are in line with previous studies highlighting the role of specialized nursing consultations in supporting patients and caregivers, improving care experience, and promoting safety through structured education and follow-up (Araújo et al., 2025; Magalhães et al., 2025; Goes et al., 2023; Suluhan et al., 2020). Among SUCEH21 dimensions (Ribeiro, 2005), Communication effectiveness and Assistance quality were highly rated, which is consistent with the findings of Pais et al. (2023), who identify emotional competence and person-centered communication as key determinants of satisfaction in nursing care. The dimensions Readiness to assist and Promotion of care continuity showed greater variability, with the latter presenting the lowest mean score. This finding may indicate variability in the continuity of care dimension, which has been associated in the literature with challenges in coordination between different levels of care and in the planning of effective follow-up strategies (Meneguetti et al., 2025).

Subgroup analysis showed that participants residing in institutional settings, although reporting a positive overall perception of care, exhibited a lower perception of continuity following the consultation. Although these differences did not reach statistical significance, they highlight the importance of implementing structured transition protocols between hospital- and home-based settings, as continuity of care during the hospital-to-home transition is strongly influenced by discharge planning, coordination between services, and the support provided to patients and families during the transition process (Gama et al., 2025). No statistically significant differences were found in satisfaction levels between participants who reported complications related to the feeding tube and those who did not. This lack of association may suggest that the experience during clinical follow-up, particularly the support provided in managing complications, is positively evaluated by participants, thereby mitigating the negative impact of such events. Nevertheless, the findings underscore the need to strengthen education on enteral nutrition, especially in situations of greater functional dependence.

The variable most clearly associated with the reported experience was participant profile, particularly regarding preferences for the consultation setting. All formal caregivers and two-thirds of informal caregivers expressed a preference for a home-based model, whereas all independent patients preferred consultations to be maintained at the hospital. This statistically significant pattern suggests that functional dependence and caregiving demands influence expectations regarding the organization of care. Previous studies have shown that patients requiring gastrostomy feeding often depend heavily on caregivers, whose burden may be reduced through structured education and ongoing professional support (Suluhan et al., 2020). Furthermore, satisfaction with healthcare services is influenced by the extent to which care models respond to patients' and caregivers' individual needs and expectations (Araújo et al., 2025; Goes et al., 2023).

No statistically significant differences were observed between satisfaction levels and sociodemographic variables, including gender, age, marital status, and employment status. Although this homogeneity may reflect a population with similar clinical and functional profiles, characterized by high levels of dependence, factors such as disease history and degree of functional limitation also influence satisfaction (Magalhães et al., 2025). In the study by Dinsa et al. (2022), the authors reported that patients with chronic conditions exhibit higher satisfaction levels than those with acute illness, supporting the consistency of the present findings.

This study has several limitations. The sample was small and non-probabilistic, with no prior sample size calculation. The face-to-face administration of questionnaires, although conducted using neutral procedures, may have introduced response bias, particularly social desirability bias. Additionally, the absence of qualitative data limits a more in-depth understanding of the reported perceptions and preferences. The high proportion of caregivers relative to patients may have influenced overall satisfaction, reflecting differences in expectations and experiences. The nature of the sample limits the external validity and generalizability of the findings, which should therefore be interpreted with caution. Despite these limitations, the results provide relevant evidence to support the development of hybrid models of nursing consultations, tailored to the functional status, preferences, and life context of patients with feeding tubes.

Conclusion

The present study demonstrated overall high levels of satisfaction with nursing consultations for enteral feeding care, particularly in the dimensions of Communication effectiveness, Assistance quality, and Information usefulness. In addition, the findings reinforce the importance of patient-centered care and the active involvement of caregivers. Nursing consultations constitute a key setting for operationalizing this approach, contributing to health gains and to the promotion of a positive care experience.

From a health policy perspective, the findings highlight the importance of prioritizing care continuity and integration as key pillars in addressing the needs of individuals with complex conditions. Coordination between hospital and community teams could be strengthened through standardized protocols, interoperable communication systems, and a clear definition of responsibilities in the post-discharge period.

In terms of practical implications, the findings support the need for organizational review of pre- and post-PEG placement pathways, the training of teams for home-based

care, and the development of care continuity indicators grounded in patient experience.

The implementation of these practices should be supported by in-service training programs aimed at updating and strengthening nurses' technical, relational, and communication skills. Clear communication of these objectives to teams, ensuring ownership of improvement processes, is essential for translating satisfaction assessment into tangible improvements in care organization.

This study contributes to the still limited national evidence on the experiences of patients with gastrostomy and their caregivers, while identifying directions for future research. Future studies may adopt mixed methods approaches, examine the impact of home-based care models on adherence to therapeutic plans, and evaluate the effects of digital integration on communication between professionals and caregivers. Further research with representative samples across diverse geographical settings is recommended to assess the consistency of these findings and the robustness of the consultation model.

Author contributions

Conceptualization: Cordeiro, R., Carvalho, A., Carvalho, J., Silva, L.
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