

Association between self-esteem and quality of life in elderly people with stomas

Associação entre autoestima e qualidade de vida em pessoas idosas estomizadas

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ABSTRACT

Objective: to assess and establish associations between sociodemographic and clinical variables, as well as self-esteem, and quality of life among elderly people with stomas. **Methods:** a cross-sectional study was conducted among elderly people with stomas receiving care through the Multidisciplinary Ostomy Patient Care Program, connected to a university hospital. The following questionnaires were used: sociodemographic and clinical questionnaires, the Rosenberg Self-Esteem Scale, and the World Health Organization Quality of Life-BREF. Analyses included descriptive statistics, *Student's* t-tests, and *Pearson's* correlation tests, with a significance level of $p \leq 0.05$. **Results:** forty elderly people participated, with a mean age of 71.65 years. The majority were men, self-identified as white, married, living with a partner or family member, with an intestinal stoma resulting from gastrointestinal cancer, and reporting good self-esteem and a satisfactory quality of life. A strong correlation was observed between self-esteem and quality of life across the assessed domains. **Conclusion:** elderly people with lower self-esteem reported a lower quality of life in the physical, psychological, social relationships, and environmental domains. **Contributions to practice:** the importance of comprehensive care for elderly people with stomas is emphasized to improve their self-esteem and, consequently, their quality of life. **Descriptors:** Self Concept; Quality of Life; Health of the Elderly; Ostomy.

RESUMO

Objetivo: avaliar e associar variáveis sociodemográficas, clínicas e a autoestima com qualidade de vida de pessoas idosas estomizadas. **Métodos:** estudo transversal, realizado com pessoas idosas estomizadas atendidas pelo Programa de Atendimento Multidisciplinar ao Paciente Ostomizado vinculado a um hospital de ensino. Foram utilizados os seguintes questionários: sociodemográfico e clínico, a Escala de Autoestima de Rosenberg e o *World Health Organization Quality of Life-BREF*. As análises incluíram estatística descritiva e os testes t de *Student* e o de correlação de *Person*, adotando $p \leq 0,05$. **Resultados:** participaram 40 pessoas idosas, média de 71,65 anos. Predominaram homens, autodeclarados brancos, casados, vivendo com companheiro ou familiar, com estoma intestinal decorrente de câncer gastrointestinal e apresentando boa autoestima e satisfatória qualidade de vida. Observou-se forte correlação entre autoestima e qualidade de vida nos domínios avaliados. **Conclusão:** as pessoas idosas com menor autoestima apresentaram menor qualidade de vida para os domínios físico, psicológico, relações sociais e meio ambiente. **Contribuições para a prática:** ressalta-se a importância de um atendimento integral as pessoas idosas estomizadas para uma melhora de sua autoestima e consequente qualidade de vida. **Descritores:** Autoimagem; Qualidade de Vida; Saúde do Idoso; Estomia.

Introduction

Aging encompasses physical, cognitive, emotional, and social changes that occur differently for each individual; it results from the gradual decline in physiological functions, an increased risk of age-related diseases, and a decrease in the body's functional capacity⁽¹⁾. The changes caused by aging and perceived in the body, in brain function, and in the environment and lifestyle of elderly people can lead to psychological changes distinct from those observed in other stages of life; these changes may progress to mental disorders and affect their cognition⁽²⁾, which in turn can intrinsically impact their self-perception and self-worth.

This significant context occurs against a backdrop of accelerated population aging, with 32.1 million people aged 60 or older (15.8% of the total), and the South and Southeast regions having the longest life expectancy⁽³⁾.

These physical changes, caused by aging, lead to functional losses and, in some cases, are compounded by inflammatory bowel diseases such as fistulizing/ileocolonic Crohn's disease and ulcerative colitis, which, together with cancer, can lead to the creation of intestinal stomas⁽⁴⁻⁵⁾. This scenario occurs primarily among elderly people compared with other age groups⁽⁶⁻⁷⁾. This represents a growing public health problem that requires strategic planning by the healthcare system for diagnosis, treatment, and long-term follow-up⁽⁸⁾. It is essential to consider that age-related bodily changes, combined with diseases that may arise at this stage of life, can negatively impact how individuals perceive and value themselves and, consequently, their quality of life.

There are approximately 400,000 with stomas in Brazil, and according to the Health Care Service for Ostomates, located in Fortaleza, Ceará, 56.6% of the patients treated at this facility are over the age of 60⁽⁸⁻⁹⁾.

Given the significant number of elderly people with stomas and the physiological changes caused by the ostomy, this group may develop psychological issues that lower their self-esteem, especially when there is a lack of adequate emotional, family, or education

support⁽¹⁰⁾. The presence of a stoma is associated with a poorer body image, low self-esteem, and lower overall quality of life compared to patients without stomas⁽¹¹⁻¹²⁾. More humane care for elderly ostomates begins with a thorough discussion of this topic and its circumstances.

Ostomy in this unique context of human development (old age) requires a more sensitive approach, as self-esteem is an individual's overall perception of themselves, encompassing feelings such as self-worth, self-acceptance, self-respect, and a sense of competence. It is a crucial element in the development of personality and psychological balance. Physical changes resulting from ostomies, changes in bowel control, and difficulties with ostomy management can negatively affect this self-assessment by shaping how the individual perceives and values themselves. Feelings such as shame, social isolation, a reduced sex life, and difficulties adapting to the new physical condition are present in the daily lives of people with stomas⁽¹²⁾. Negative feelings among people with stomas may arise from the new circumstances they face. Combined with the challenges common to this stage of life, these challenges highlight the need to discuss this reality and its impact on self-esteem and quality of life among older adults with ostomies, so that improvements can be sought.

A good quality of life among elderly people is closely linked to high self-esteem and to local policies that boost self-esteem and promote "aging" as a time of new opportunities, discoveries, and pleasures, all of which are indispensable for this population in this reality⁽¹³⁾. Therefore, it is up to healthcare professionals to provide comprehensive, sensitive, and empathetic care that goes beyond technical guidance; it is essential to consider the biopsychosocial-spiritual context, how information is processed, and the effects of this condition on self-care and quality of life.

To foster this awareness and improve the quality of care provided, it is essential to discuss the impacts of ostomy on self-esteem, well-being, social relationships, and quality of life among elderly people. Given this scenario, the question arises: which socio-demographic and clinical factors are associated with

the quality of life of elderly person with stomas? To address this question, the objective of this study was to assess and establish associations between sociodemographic and clinical variables, as well as self-esteem, and quality of life among elderly people with stomas.

Methods

Type of study

This is a cross-sectional study conducted in accordance with the recommendations of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

Study setting

The study was conducted at the ostomy outpatient clinic affiliated with the Health Care Service for Ostomates, known regionally as the Multidisciplinary Care Program for Ostomates, in a health micro-region of the Triângulo Mineiro, which is responsible for the care of individuals with intestinal and urinary stomas.

Population and sample

The eligible population was composed of 60 elderly people (aged 60 years or older), followed up at Multidisciplinary Care Program for Ostomates on Fridays in the afternoon (day of the week exclusively for this service), where ostomy bags were delivered and appointments scheduled with the program's stoma therapist took place.

A non-probabilistic convenience sample was used, including elderly people with intestinal and/or urinary stomas who were regularly registered with the service and who attended the outpatient clinic on the data collection days. Of all the elderly people approached, eight refused to participate in the study, and one was excluded for failing to complete the questionnaires. Thus, the final sample consisted of 40 participants. This sample size met the preliminary cal-

culation ($n=38$), considering a margin of error of 10% and a 95% confidence interval (CI).

Data collection instruments

Data collection was conducted using three structured instruments: a sociodemographic and clinical questionnaire, developed by the researchers, which included information on age, sex, self-reported race, marital status, city of origin, religion, and educational level. The instrument also included clinical data, such as the primary diagnosis that led to ostomy creation, the presence of comorbidities (diabetes mellitus and hypertension), anthropometric data, the year of surgery, the type of stoma, and devices used.

The Rosenberg Self-Esteem Scale was used to assess participants' overall self-esteem. The instrument consists of 10 items, five of which assess positive feelings (items 1, 3, 4, 7, and 10) and five of which assess negative feelings (items 2, 5, 6, 8, and 9), measuring feelings of self-worth, self-acceptance, self-respect, perceived competence, and self-deprecation. Responses are organized on a Likert scale, ranging from "strongly disagree" to "strongly agree," scored from 1 to 4, where higher scores indicate lower self-esteem. The scale has been validated in the Brazilian population and exhibits adequate psychometric properties⁽¹⁴⁾.

To assess quality of life, the World Health Organization Quality of Life-BREF (WHOQOL-BREF) instrument, developed by the World Health Organization (WHO), was used. This questionnaire consists of 26 items with responses on a Likert scale, referring to the past two weeks; two items are for self-assessment of quality of life, and the remaining items are distributed across four domains: physical, psychological, social relationships, and environment. Domain scores are calculated according to WHO guidelines; higher scores indicate a better perception of quality of life⁽¹⁵⁾.

Period and data collection

Data collection took place from October 2024

to March 2025 and was conducted by nursing residents after they received training and standardization of the interviews from the supervisor. The research assistants interviewed the elderly people on the days they visited the outpatient clinic for care and/or to pick up their collection bags, as previously scheduled. They were briefed on the study's objectives, and after providing informed consent, they were taken to a private room where the printed questionnaires were administered; the interviews took an estimated 15 to 20 minutes.

Data analysis

The data were organized, coded using a dictionary, double-entered and validated in an Excel® spreadsheet, and analyzed using IBM® SPSS version 22. Descriptive statistics were calculated, with categorical and quantitative variables analyzed using measures of absolute and relative frequencies.

To calculate the quality-of-life domains, the syntax proposed by the WHOQOL-BREF instrument was used. It should be noted that the prerequisites for using parametric tests were duly considered (normality, homoscedasticity, and linearity tests) with the support of the institution's statistician.

Levene's test was performed to assess Equality of Variances, and Student's t-test was used to examine differences in the means of the quality-of-life domains between groups by sex (female and male) and by comorbidities (presence or absence of diabetes mellitus and hypertension); and to examine correlations between the WHOQOL -BREF domains and the Rosenberg Self-Esteem Scale score was assessed using Pearson's correlation coefficient, considering the following cutoff points: $r = |\pm 0.10|$ = weak correlation, $r = |\pm 0.30|$ = moderate correlation, and $r = |\pm 0.50|$ = strong correlation⁽¹⁶⁾.

Ethical considerations

The Consensus artificial intelligence tool was used to correct grammar, improve the clarity of the

text, correct bibliographic references, and find articles to support the study.

The research was approved by the Research Ethics Committee under Opinion No. 7.125.441/2024 and Ethics Review Certificate No. 83337024.5.0000.8667, and complies with the guidelines and regulatory standards for research involving human subjects, in accordance with Resolution No. 466/2012 of the National Health Council.

Results

Forty elderly people participated in the study, with a mean age of 71.65 years (standard deviation ± 6.58), ranging from 60 to 86 years. The majority of participants were male, self-identified as white, residents of Uberaba, married, living with a partner or family member, Catholic, and had up to seven years of schooling (Table 1).

Table 1 – Sociodemographic characterization of the elderly people (n=40). Uberaba, MG, Brazil, 2024-2025

Variables	n (%)
Sex	
Male	21 (52.55)
Female	19 (47.5)
Self-reported color	
White	22 (55.0)
Brown	17 (42.5)
Black	1 (2.5)
City	
Uberaba	17 (42.5)
Other states	9 (22.5)
Other cities in the Southern Triangle of Minas Gerais	8 (20.0)
Other cities in Minas Gerais	6 (15.0)
Lives alone	
No	28 (70.0)
Yes	12 (30.0)
Marital status	
Married/ Stable Union	17 (42.5)
Widower	10 (25.0)
Divorced	6 (15.0)
Single	6 (15.0)
Other	1 (2.5)
Religion	
Catholic	25 (62.5)
Evangelical	6 (15.0)
Spiritist	4 (10.0)
Other	5 (12.5)
Education (years)	
No education or < 1	4 (10.0)
1 to 7	24 (60.0)
8 to 14	8 (20.0)
≥15	4 (10.0)

Table 2 presents the clinical and therapeutic variables; most of the elderly patients underwent ostomy surgery due to gastrointestinal cancer, and the type of stoma was intestinal. Regarding comorbidities, most reported hypertension, and a minority reported diabetes mellitus. In addition, overweight elderly patients predominated.

Table 2 – Characterization of clinical variables among elderly people (n=40). Uberaba, MG, Brazil, 2024–2025

Variables	n (%)
Diagnosis	
Gastrointestinal cancer	28 (70.0)
Bladder, urethra, and urinary tract cancer	8 (20.0)
Impairments secondary to infection	3 (7.5)
Cancer of the female reproductive system	1 (2.5)
Diabetes mellitus	
No	26 (65.0)
Yes	14 (35.0)
Systemic arterial hypertension	
Yes	26 (65.0)
No	14 (35.0)
Body mass index	
Normal	14 (35.0)
Overweight	19 (47.5)
Obesity	7 (17.5)
Type of stoma	
Intestinal	32 (80.0)
Urinary	8 (20.0)

As shown in Table 3, elderly people rated their self-esteem as good (mean < 20.00), their quality of life as satisfactory, as well as the domains of social relationships, environment, and psychological well-being (means ≥ 60), while they rated the physical domain as fair (mean = 56.25).

Table 3 – Assessment of self-esteem and quality-of-life domains among elderly people (n=40). Uberaba, MG, Brazil, 2024–2025

Variables	Mean (Standard Deviation)
Self-esteem	19.53 (3.38)
Physical	56.25 (8.99)
Psychological	60.20 (5.73)
Social relationships	64.37 (14.61)
Environment	61.25 (11.16)
Self-assessment of quality of life	65.62 (15.95)

When comparing the quality-of-life domains with the variables of sex (female and male), having diabetes mellitus, and having systemic hypertension, no statistically significant differences were found between these groups.

In Table 4, which shows the correlations between the WHOQOL-BREF domains and the Rosenberg Self-Esteem Scale score, a statistically significant negative correlation was observed between self-esteem and the physical, psychological, environmental, and self-evaluation domains of quality of life. Considering that higher scores on the self-esteem scale correspond to lower self-perceived self-esteem, the findings indicate that lower self-esteem was associated with lower quality-of-life scores across all domains. The highest correlation coefficients were identified in the environmental domain, followed by self-evaluation, the physical domain, and the psychological domain, demonstrating strong associations. In the social relations domain, a moderate negative correlation was observed, though it was not statistically significant.

Table 4 – Correlation between the WHOQOL-BREF variables and the Rosenberg Self-Esteem Scale (n=40). Uberaba, MG, Brazil, 2024–2025

WHOQOL-BREF Domains	Self-esteem	
	r*	p-value†
Physical	-0.50	0.001
Psychological	-0.50	0.001
Social relationships	-0.30	0.057
Environment	-0.59	0.001
Self-assessment of quality of life	-0.54	0.001

*r: Pearson's correlation test; †Level of significance; WHOQOL-BREF: World Health Organization Quality of Life–BREF

Discussion

The predominance of men with ostomies is consistent with other studies^(17–19), as they often do not seek health care for preventive screenings and, when diagnosed, may require ostomies more frequently than women⁽¹⁸⁾. The sample profile also aligns in other respects, with a predominance of individuals living with

a partner or having family support, who are Catholic, and who have up to eight years of schooling⁽¹⁷⁻¹⁸⁾.

Although this study found a predominance of men among ostomates, a study conducted in Minas Gerais identified a higher frequency of elderly women with ostomies⁽²⁰⁾, suggesting that regional differences, the profile of referral services, and population characteristics may influence the distribution by sex.

About the clinical aspects, most elderly people underwent ostomy surgery due to gastrointestinal cancer; neoplasms of the digestive tract, particularly colorectal cancer and other gastrointestinal tumors, were the main indications for ostomy creation in this population, a finding consistent with the literature^(6,17,19,21).

Regarding self-esteem, most elderly people reported having good self-esteem; this finding is consistent with findings from some studies, in which, despite the physical and psychosocial changes resulting from ostomy, ostomized patients may exhibit satisfactory self-esteem and quality of life, especially after adapting to the ostomy⁽²¹⁾. However, in contrast to the findings of this study, Egyptian ostomates reported low self-esteem and a low overall quality of life across all assessed domains, particularly during the first few months of adaptation following ostomy creation⁽¹¹⁾. These discrepancies may reflect differences in ostomy duration, access to specialized services, and the psychosocial support provided to participants.

Low self-esteem was found to be associated with a poorer quality of life, consistent with studies indicating that elderly people with low self-esteem tend to have a poorer health-related quality of life, as evidenced in the physical and psychological/emotional domains⁽²²⁾.

The physical domain was considered fair, as it had the lowest mean score among the quality-of-life aspects assessed. Factors such as pain, fatigue, dependence on treatments, limitations in daily activities, and difficulties with ostomy self-care can negatively influence physical aspects and lead to a decline in quality of life in this domain. Self-esteem is affected and may contribute to a reduction in quality of life driven by feelings such as shame^(8-9,20,22).

About quality of life, similar to the participants in this study, older adults with ostomies in the Southeast region of Brazil reported favorable scores in the physical and social domains of quality of life⁽²⁰⁾. However, elderly people in Europe demonstrated poorer physical and social functioning compared to the non-ostomate population, and this impact was more pronounced among younger older adults (≤ 75 years), as they exhibited greater functional limitations and a decline in overall quality of life compared to non-ostomate older adults with colorectal cancer and the general population⁽²³⁾. These differences may be related to the degree of functional independence, the duration of adaptation to the stoma, the presence of comorbidities, and distinct sociocultural characteristics, as well as to the specialized care received in Brazil through programs designed to serve ostomates offered by the Unified Health System.

Regarding the psychological domain, the participants in this study reported satisfactory quality-of-life scores; however, in the correlation analyses, those with lower scores in this domain also reported lower self-esteem, consistent with the literature describing the emotional distress resulting from ostomy surgery. Ostomized individuals may experience anxiety, depressive symptoms, difficulties with emotional adjustment, and challenges related to accepting their new body and social reintegration, resulting from the demands of treatment, rehabilitation, and adaptation to a new lifestyle^(18,24-25).

Elderly people with lower self-esteem also exhibited impairments in social relationships, attributed to isolation, limitations in social activities, and fear of exposure or leakage from the stoma, all of which have a negative impact on them. Practices such as proper stoma placement and management contribute to the individual's self-care and social reintegration, facilitating improved interpersonal interactions^(20,26).

About the environmental domain, impairment may occur due to the individual's interaction with the physical, social, and community environments⁽¹⁰⁾. Furthermore, individuals with a stoma need to be supported in a way that allows them to fulfill their roles

in society and integrate into family, community, and social environments, thereby maintaining satisfactory relationships with their living environment⁽²⁵⁾.

The magnitude of the association observed in the environmental domain warrants special attention, given that elderly individuals with ostomies often require ongoing monitoring, regular access to ostomy supplies, family support, and adequate conditions for self-care.

Although the literature on ostomy care focuses predominantly on the physical and emotional repercussions of the condition, the results of the present study suggest that elderly people's perceptions of their living environment are also closely related to their self-evaluations. The "environment" domain encompasses aspects such as safety, financial resources, access to health services, housing conditions, leisure opportunities, and community participation. In light of the above, the findings suggest that living with a stoma extends beyond physical adaptations to encompass social and structural aspects. Such factors can influence elements such as self-esteem and quality of life.

Recognizing the impact of ostomy on the self-esteem of elderly people in physical, psychological, and social contexts, as well as in their interactions with their environment, is the foundation for raising professional awareness to explore and discuss this topic, thereby inspiring best practices and humanized care for this group, in addition to striving for their best quality of life. The rehabilitation process for ostomates involves emotional aspects, proper ostomy management, and adaptation to social interactions, factors that influence self-esteem and quality of life. Effective self-care, when combined with adaptation to the new physical condition and the maintenance of interpersonal relationships, fosters a positive perception of quality of life and self-esteem among ostomates⁽²⁵⁻²⁷⁾.

To enhance self-care and self-efficacy, and consequently the quality of life of elderly people, it is essential that healthcare services for people with ostomies properly fulfill their role by providing appropriate health education, utilizing supportive technologies, and offering counseling⁽²⁷⁾ so that these individuals beco-

me more knowledgeable and confident regarding the management of their devices and receive adequate rehabilitation across all domains of their quality of life.

Self-esteem is essential to how elderly people with ostomies cope with, come to terms with, and face their health condition; furthermore, approaches that consider the emotional and subjective aspects of care for this group are of unquestionable importance. The multidisciplinary care provided by Ostomy Health Care Services goes beyond the distribution of ostomy appliances. Users considered access to the service, supplies, and consultations with nurses to be sufficient and noted that this greatly aids in adapting to the ostomy⁽²⁸⁾.

Despite the small sample size and non-probabilistic nature of the study, research such as this is useful for generating hypotheses and exploring correlations. The most significant contribution of this study is its demonstration that self-esteem is consistently associated with multiple dimensions of quality of life in elderly people with ostomies.

The literature primarily discusses the impacts of ostomy on physical, emotional, and social aspects. However, there is still a scarcity of research specifically focused on the elderly population that simultaneously explores the relationship between self-esteem and the different domains of quality of life. In this regard, the results reinforce the need to understand adaptation to ostomy as a multidimensional process, influenced not only by bodily changes but also by the environmental and social conditions in which the individual lives. An elderly person's adaptation to a stoma does not stem exclusively from physical or psychological factors, as environmental conditions, access to resources, and social integration appear to play an equally important role in the relationship between self-esteem and quality of life. It also highlights the role of specialized multidisciplinary care programs offered to this population.

Study limitations

Notable study limitations include the small sample size, the non-probability sampling method, and the fact that the research was conducted at a sin-

gle specialized clinic, which limits the generalizability of the results to other settings and contexts of care for ostomates. Furthermore, data collection at a single specialized service may reflect local particularities. Therefore, we suggest conducting further research at different services and in different regions of the country to increase the representativeness of the findings.

Contributions to practice

The results of this study contribute to nursing practice by highlighting that care for elderly person with ostomies must take psychosocial aspects into account, especially self-esteem, which has been shown to be associated with quality of life, in addition to technical considerations. In the field of care, the findings reaffirm the nurse's role in strengthening autonomy, self-care, and adaptation to ostomy through educational interventions, a supportive environment, and continuous follow-up in specialized services. The results contribute to the training of more sensitive professionals and to a comprehensive approach to the specific aspects of ostomy care in older adults. In the field of research, this study expands knowledge on the topic and highlights the need for in-depth investigations aimed at identifying ways to improve and restore self-esteem and quality of life in elderly people with ostomies.

Conclusion

Self-esteem was rated as good, and quality of life was rated as satisfactory in the psychological, social relationships, environment, and overall self-assessment domains, and as fair in the physical domain. In terms of correlations, elderly people with lower self-esteem also had lower scores in all domains assessed.

Authors' contributions

Conception and design or analysis and interpretation of data: **Leocadio GC, Cardoso EV, Faria VB, Nicolussi AC**. Drafting the manuscript or providing critical

review of the intellectual content: **Leocadio GC, Cardoso EV, Zuffi FB, Nicolussi AC**. Final approval of the version to be published and agreement to be responsible for ensuring that all aspects of the manuscript related to the accuracy or integrity of any part are properly investigated and resolved: **Leocadio GC, Cardoso EV, Faria VB, Zuffi FB, Nicolussi AC**.

Data availability

The authors state that the dataset supporting the results is available upon request to the corresponding author.

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