






SOCIODEMOGRAPHIC AND SANITATION AND HOUSING INDICATORS ON THE QUALITY OF LIFE OF PEOPLE WITH STOMA

Bianca Cristine Soares Ferreira¹ , Shirley Santos Martins¹ , Tamires Barradas Cavalcante¹ , João Ferreira Silva Junior^{1,*} , Sueli Coelho da Silva Carneiro² 

ABSTRACT

Objectives: To analyze the relationships between the quality of life (QOL) of people with stoma with sociodemographic, clinical, lifestyle, sanitation, and housing indicators. **Method:** Cross-sectional study with a sample of 106 individuals with stoma interviewed from May to December 2019. A sociodemographic and clinical questionnaire and the City of Hope Quality of Life Ostomy Questionnaire were used. **Results:** Spiritual well-being (7.71 ± 1.09) was the best performing domain. Quality of life did not differ between men and women ($p = 0.372$), but was associated with education (< 0.001) and family income ($p = 0.025$), diabetes ($p = 0.008$) and alcoholism ($p = 0.044$), drinking water conditions ($p < 0.001$), garbage disposal ($p = 0.021$), having electricity ($p = 0.034$), housing type ($p = 0.026$), number of rooms ($p = 0.023$), and housing coverage ($p = 0.021$). **Conclusion:** worse socioeconomic, sanitation, and housing indicators appear to negatively impact the QOL of people with stomata.

DESCRIPTORS: Stoma. Quality of life. Social class. Basic sanitation. Lifestyle. Enterostomal therapy.

INDICADORES SOCIODEMOGRÁFICOS E DE SANEAMENTO E MORADIA NA QUALIDADE DE VIDA DE PESSOAS COM ESTOMIA

RESUMO

Objetivo: Analisar as relações entre a qualidade de vida (QV) de pessoas com estomia com indicadores sociodemográficos, clínicos, de estilo de vida, de saneamento e moradia. **Métodos:** Estudo transversal com amostra de 106 indivíduos com estomia entrevistados de maio a dezembro de 2019. Utilizou-se um questionário sociodemográfico e clínico e o *City of Hope - Quality of Life - Ostomy Questionnaire*. **Resultados:** O bem-estar espiritual ($7,71 \pm 1,09$) foi o domínio com melhor performance. A QV não diferiu entre homens e mulheres ($p = 0,372$), porém esteve associada à escolaridade ($< 0,001$) e renda familiar ($p = 0,025$), ao diabetes ($p = 0,008$) e etilismo ($p = 0,044$), às condições da água para consumo ($p < 0,001$), ao destino do lixo ($p = 0,021$), em ter energia elétrica ($p = 0,034$), ao tipo de moradia ($p = 0,026$) e ao número de cômodos ($p = 0,023$) e tipo de cobertura da habitação ($p = 0,021$). **Conclusão:** Piores indicadores socioeconômicos, de saneamento básico e moradia, parecem impactar negativamente a QV de pessoas com estomias.

DESCRIPTORIOS: Estomia. Qualidade de vida. Classe social. Saneamento básico. Estilo de vida. Estomaterapia.

1. Universidade Federal do Maranhão – Hospital Universitário – São Luís (MA), Brazil.

2. Universidade Estadual do Rio de Janeiro – Faculdade de Ciências Médicas – Rio de Janeiro (RJ), Brazil.

*Correspondence author: jjunior39@yahoo.com.br

Section Editor: Juliano Teixeira Moraes

Received: Dec. 2020, 21 | Accepted: May 2021, 06

How to cite: Ferreira BCS; Martins SS; Cavalcante TB; Silva Junior JF; Carneiro SCS. Sociodemographic and sanitation and housing indicators on the quality of life of people with stoma. ESTIMA, Braz. J. Enterostomal Ther., 2021, 19: e1921.

https://doi.org/10.30886/estima.v19.1103_IN

INDICADORES SOCIODEMOGRÁFICOS Y SANITARIOS Y HABITACIONALES SOBRE LA CALIDAD DE VIDA DE LAS PERSONAS OSTOMIZADAS

RESUMEN

Objetivo: Analizar las relaciones entre la calidad de vida (CV) de las personas con estoma con indicadores sociodemográficos, clínicos, de estilo de vida, saneamiento y vivienda. **Métodos:** Estudio transversal con una muestra de 106 ostomizados, entrevistados de mayo a noviembre de 2019. Se utilizó un cuestionario sociodemográfico y clínico y el Cuestionario City of Hope - Quality of Life - Ostomy. **Resultados:** El bienestar espiritual ($7,71 \pm 1,09$) fue el dominio con mejor desempeño. La CV no difirió entre hombres y mujeres ($p = 0,372$), pero se asoció con la educación ($< 0,001$) y los ingresos familiares ($p = 0,025$), la diabetes ($p = 0,008$) y el alcoholismo ($p = 0,044$), con las condiciones de agua potable ($p < 0,001$), el destino de la basura ($p = 0,021$), la disponibilidad de electricidad ($p = 0,034$), el tipo de vivienda ($p = 0,026$) y el número de habitaciones ($p = 0,023$) y tipo de cobertura de vivienda ($p = 0,021$). **Conclusión:** Peores indicadores socioeconómicos, saneamiento básico, vivienda, parecen impactar negativamente la calidad de vida de las personas con ostomía.

DESCRIPTORES: Ostomía; Calidad de Vida. Clase Social; Saneamiento; Estilo de Vida.

INTRODUCTION

Stoma is a word of Greek origin that means opening or mouth and its confection is performed through surgery in order to build a new cavity, temporary or permanent, in the abdominal wall whose function is to eliminate feces, waste and/or urine^{1,2}. Among the main causes for this condition are colon and rectal cancer, trauma (gunshot or stab wounds and automobile accidents) and inflammatory bowel diseases (ulcerative colitis and Crohn's disease)³.

After the surgical process, these patients go through a major reconfiguration of their anatomy and modifications in their routine and bodily functions. Evacuation and elimination of flatus occur in a completely different way, which is through an ostomy and totally uncontrolled, and they start living daily with a collecting bag attached to the abdomen to store the effluent^{4,5}.

Such situations promote a strong emotional impact for people with stoma, because this process causes alterations in self-image and self-esteem, also determining other associated disorders. This change causes various disruptions in their lives that these people have to live with and that impair their quality of life (QOL)⁶. It is believed that social determinants of health, such as sanitation and housing type, impact the QOL of this population.

Quality of life is defined as a subjective evaluation of the positive and negative aspects of life. It is considered in a broad and multidimensional concept, encompassing the notion of holistic well-being, encompassing elements concerning health and extending beyond them. And, it also includes a personal assessment about their life experiences and social well-being⁷.

Patients who need to live with stoma go through an experience that is considered one of the most difficult of their lives, even with the possibility that it is a surgical intervention that can allow increased survival in the cases of cancer patients, as well as in situations that would condition a significant improvement in QOL, as in the case of inflammatory bowel diseases. Still, the making of the stoma is a phenomenon that generates multiple psychosocial effects that directly influence QOL⁸.

Among the changes in the body, the use of the collecting equipment makes it difficult to coexist, due to the concern with the elimination of gases, odor, leakage, and physical discomfort, causing the person with stoma to adopt a posture of detachment, isolation from social coexistence and the work environment, leading him/her to retirement by disability even⁵.

In addition, complications may arise, among them parastomal hernia, stoma prolapse, stenosis, fistula, dermatitis, or peristomal abscess. Or complications at a systemic level, mainly related to hydro-electrolyte disturbances in high output stomata, anemia, pneumonia, and sepsis^{2,5}.

Therefore, studies that allow health professionals to identify the main factors that hinder the QOL of this population and generate knowledge that can serve as tools and a guiding factor in decision making are necessary, as long as they integrate new knowledge about the structure, processes, and results of the services offered to this public⁸. Thus, facilitating

the understanding of the state of life of people with stoma and improving care by providing subsidies for better coping with problems and, consequently, improving QOL.

OBJECTIVE

To analyze the relationships between the QOL of people with stoma with sociodemographic, clinical, lifestyle, sanitation, and housing indicators.

MÉTODOS

This is an observational, descriptive, cross-sectional study with a quantitative approach. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) strategy for observational studies⁹. Data collection was conducted during the period from May to December 2019. The study was developed in the outpatient service of the Hospital Universitário da Universidade Federal do Maranhão (HUUFMA), more specifically in the Outpatient Clinic of Enterostomal therapy of the Unidade Hospitalar Presidente Dutra and in the distribution center of the Programa de Órtese e Prótese do Município de São Luís, Maranhão.

The study sample was by convenience, with individuals who proved to be more approachable, collaborative, and available, depending on factors such as availability and frequency of appointments. One hundred and six users with elimination stomata on a temporary or permanent basis, who underwent evaluation at the enterostomal therapy outpatient clinic, were interviewed. Individuals were included who had elimination stoma (colostomy, ileostomy or urostomy), were 18 years old or older, and were registered with the county's orthotics and prosthetics program. Users with stoma for less than 6 months, hospitalized or with acute illnesses, and who did not undergo outpatient evaluation of stoma enterostomal therapy were excluded.

Data collection was carried out through interviews using two questionnaires with closed-ended questions. The first consisted of a structured questionnaire to assess clinical, sociodemographic, economic, housing and lifestyle data. This questionnaire, prepared by the study team, contained questions regarding age, gender, marital status, number of children, current occupation, religion, education (considered low until incomplete elementary school; medium when complete elementary and high school; and high when incomplete, complete, and post-graduate higher education), monthly income (considered low until two minimum wages; medium between three and four wages; and high when more than four minimum wages), number of residents per household, physical activity practice, and self-reported drinking and smoking. The clinical data investigated were: type of stoma, length of stay of the stoma, the cause of surgery and its respective date, presence of comorbidities, and complications presented.

The second tool used was the City of Hope Quality of Life Ostomy Questionnaire (COH-QOL-OQ), questionnaire developed by Grant and collaborators¹⁰ from another instrument by the authors themselves, in order to assess the exclusive QOL of patients with stoma¹¹. This questionnaire was translated, culturally adapted, and validated in Brazil by Gomboski¹². The COH-QOL-OQ is composed of 43 questions arranged into 4 domains: physical well-being (BEF), psychological well-being (BEP), social well-being (BES), and spiritual well-being (BEE), with answers presented on a scale of 0 to 10. Physical well-being domain: 1 to 11, psychological well-being domain: 12 to 24, social well-being domain: 25 to 36, and spiritual well-being domain: 37 to 43¹³.

The collected data were imputed into Microsoft Excel software and then imported into statistical Stata 16.0 software. The categorical variables were presented as absolute and relative frequencies, and the quantitative variables as mean and standard deviation. The normality of the continuous variables was verified by the Shapiro-Wilk test. Bivariate analysis was performed between the explanatory variables and the QOL outcome. For the dichotomous variables the student's t-test was used, for the polytomous variables one-factor analysis of variance (ANOVA one-way) was used. Pearson's linear correlation was used to analyze the continuous normal variables. Results with a p-value < 0.05 were considered statistically significant.

This study is part of a larger project entitled "Evaluation on the sexual function and quality of life of people with stomata", approved by the Ethics and Research Committee of the University Hospital of the Federal University of Maranhão, under opinion No. 3.077.936. The participants were informed about the privacy and reliability aspects of the information, being

assured of the right to withdraw from participation at any time. The Informed Consent Form (ICF) was signed by the users who agreed to participate in the research. The study is in accordance with Resolution 466/12 of the National Health Council.

RESULTS

A total of 106 people with stoma, with a mean age of 46.85 (\pm 15.46) years, participated in the study. Of those, 61 (57.55%) were male, 53 (50.00%) said they lived in the state capital, 70 (66.04%) said they were brown, and 41 (38.68%) were married. In addition, 56 (52.83%) had a medium level of education (complete elementary and high school). Regarding family income, 86 (81.13%) said they received less than three minimum wages, and 61 (57.55%) said they were catholic (Table 1).

Table 1. Demographic and socioeconomic characteristics of individuals with stoma and associations with quality of life (n = 106). São Luís (MA) – 2020.

Variable	Mean (\pm SD) or freq. (%)	p-value
Age	46.85 (15.46)*	0,388¹
Gender		0,372²
Male	61 (57.55)	
Female	45 (42.45)	
Municipality of residence		0,505³
State capital	53 (50.00)	
Metropolitan region	16 (15.09)	
Município do interior	36 (33.96)	
Other state	01 (0.94)	
Ethnicity		0,395³
Yellow	02 (01.89)	
White	21 (19.81)	
Black	13 (12.26)	
Brown	70 (66.04)	
Marital status		0,359³
Married	41 (38.68)	
Single	28 (26.42)	
Widower	02 (01.89)	
Divorced	02 (01.89)	
Separated	04 (03.77)	
Stable union	29 (27.36)	
Education		< 0,001³
Low	41 (38.68)	
Medium	56 (52.83)	
High	09 (08.49)	
Income		0,025³
Low	86 (81.13)	
Medium	10 (09.43)	
High	10 (09.43)	
Religion		0,063³
Catholic	61 (57.55)	
Spiritism	03 (02.83)	
Evangelicalism	33 (31.13)	
Jehovah's witness	01 (0.94)	
None	06 (05.66)	
Other	02 (01.89)	

SD: Standard deviation; *Mean and SD; Freq: absolute frequencies; ¹Pearson's linear correlation; ²Student's t-test for independent samples; ³One-way ANOVA.

Clinically, it was observed that the most predominant type of ostomy was colostomy, for 60 (56.60%) participants. Among the causes for the construction of the stoma, colorectal cancer with 21 (19.81%) and bowel with 18 (16.98%), and inflammatory diseases with 18 (16.98%) cases were the most cited. However, 56 (52.83%) ostomies were temporary (Table 2). Dermatitis proved to be the main complication, for 41 (38.68%) respondents. Participants had an average of 52 months of the stoma confection (Table 2).

Table 2. Clinical and lifestyle profile of individuals with ostomies and associations with quality of life (n = 106). São Luís (MA) – 2020.

Variable	Mean (\pm SD) or freq. (%)	p-value
Type of ostomy		0,798¹
Colostomy	60 (56.60)	
Ileostomy	36 (33.96)	
Urostomy	09 (08.49)	
> 1 stoma	01 (0.94)	
Permanence of the ostomy		0,021¹
Temporary	56 (52.83)	
Definitive	40 (37.74)	
Undetermined	10 (09.43)	
Cause for making the ostomy		0,301¹
Colorectal cancer	21 (19.81)	
Bowel cancer	18 (16.98)	
Firearm-related trauma	15 (14.15)	
Blunt force trauma	05 (04.72)	
Inflammatory disease	18 (16.98)	
Rectovaginal fistula	01 (0.94)	
Diverticulitis	02 (01.89)	
Acute obstructive abdomen	13 (12.26)	
Other	13 (12.26)	
Hypertension		0,139²
Yes	20 (18.87)	
No	86 (81.13)	
Diabetes		0,008²
Yes	13 (12.26)	
No	93 (87.74)	
Time of confection of the ostomy	52.92 (62.95)*	0,214³
Receives government collectors		0,421²
Yes	88 (83.02)	
No	18 (16.98)	
Complications		0,990¹
Parastomal hernia	13 (12.26)	
Retraction	02 (01.89)	
Prolapse	11 (10.38)	
Dermatitis	41 (38.68)	
Stenosis	01 (0.94)	
Other	03 (02.83)	
More than one complication	24 (22.64)	
None	11 (10.38)	
Alcoholism		0,044²
No	90 (84.91)	
Yes	16 (15.09)	
Smoking		0,188²
No	94 (88.68)	
Yes	12 (11.32)	
Physical activity		0,238¹
None	72 (67.92)	
Sporadic	24 (22.64)	
Weekly	08 (07.55)	
Other	02 (01.89)	

SD: standard deviation; *Mean and SD; Freq: absolute frequencies; ¹One-way ANOVA; ²Student's t-test for independent samples; ³Pearson's linear correlation;

Of the 106 individuals, 60 (60.38%) had running water at home and 67 (63.21%) consumed filtered water daily. Public garbage collection was the main form of solid waste disposal for 90 (84.91%) individuals in the sample. Only 33 (31.13%) said they had a sewage system in their homes and 103 (97.17%) said they had electricity (Table 3).

Table 3. Sanitation and housing indicators of individuals with stomata and associations with quality of life (n = 106). São Luís (MA) – 2020.

Variable	Mean (\pm SD) or Freq. (%)	p value
Water supply		0,201¹
Well	40 (37.74)	
River	02 (01.89)	
General network	64 (60.38)	
Conditions of water use		< 0,001¹
Filtered	67 (63.21)	
Mineral	27 (25.47)	
Without prior care	12 (11.32)	
Garbage disposal		0,021²
Public collection	90 (84.91)	
Burned	16 (15.09)	
Disposal of waste		0,079¹
Sewer	33 (31.13)	
Black pits*	27 (25.47)	
Septic tank**	42 (39.62)	
Open sky	04 (03.77)	
Electric Power		0,034²
Yes	103 (97.17)	
No	03 (02.83)	
Housing type		0,026¹
House	97 (91.51)	
Apartment	05 (04.72)	
Room	03 (02.83)	
Others	01 (0.94)	
Housing ownership		0,478¹
Owner	88 (83.02)	
Rental	11 (10.38)	
Given	07 (06.60)	
Number of rooms		0,023¹
1 to 3	19 (17.92)	
4 to 6	66 (62.26)	
7 to 9	19 (17.92)	
> 9	02 (01.89)	
Coverage type		0,021¹
Tile	19 (17.92)	
Tile and liner	66 (62.26)	
Slab***	19 (17.92)	
Straw	02 (01.89)	

SD: Standard deviation; Freq: absolute frequencies; ¹One-way ANOVA; ²Student's t-test for independent samples; ³Pearson's linear correlation. *Black pits are holes with or without lining of the internal walls, in which human waste is dumped into the opening and comes into direct contact with the ground, without any kind of treatment; **These are holes with lining of the internal walls, in which human waste does not come into contact with the ground and does not contaminate the water table; ***Flat structural element, usually horizontal, represented as a concrete plate.

As for QOL, spiritual well-being (7.71 ± 1.09) was the domain with the best rated performance, and social well-being (5.29 ± 1.80) was the most compromised domain among people with stoma (Table 4). There was no significant difference in QOL ($p = 0,372$) between men and women (Fig. 1).

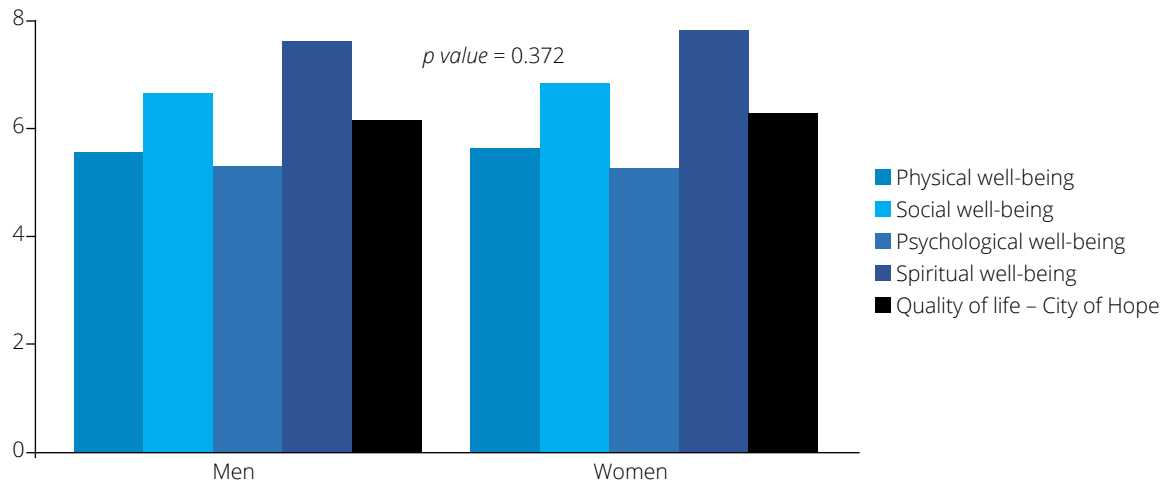


Figura 1. Quality of life of people with ostomies, according to gender. São Luís (MA) – 2020.

The variables analyzed that were significantly associated with the QOL of people with stomata were education, since people with higher education had higher QOL scores ($p < 0.001$); family income, since people with higher income had better QOL scores ($p = 0,025$); and predicted permanence of the ostomy, as people with definitive ostomies had higher mean scores compared to people with ostomies with undetermined prognosis ($p = 0,021$). Those who had comorbidities, such as diabetes ($p = 0,008$) and were alcoholics ($p = 0,044$) also had worse QOL scores.

As for sanitation and housing indicators, the results showed that those who consumed untreated water had worse QOL levels ($p < 0.001$). Those who did not have public garbage collection had worse QOL ($p = 0,021$). The worse the housing ($p = 0,026$) and the fewer the number of rooms ($p = 0,023$), the worse the QOL. Housing with electricity conferred better QOL to this public ($p = 0,034$). Those who lived in a house with a straw roof obtained worse levels of QOL ($p = 0,021$).

Table 4. Quality of life of individuals with stoma seen at a university hospital (n = 106). São Luís (MA) – 2020.

Variable	Mean (\pm SD)	Minimum-maximum
Physical well-being (0–11)	5.61 (1.93)	1.37 to 9.17
Psychological well-being (0–13)	6.72 (1.54)	2.78 to 9.75
Social well-being (0–12)	5.29 (1.80)	1.40 to 8.86
Spiritual well-being (0–7)	7.71 (1.09)	4.02 to 9.44
Total score* (0–10)	6.20 (1.36)	3.56 to 9.16

SD: standard deviation; *City of Hope Quality of Life Ostomy Questionnaire (COH-QOL-OQ).

DISCUSSION

The results showed that the majority of people with stoma were male and aged between 40 and 50 years, this finding meets the evidence of another study, showing the same prevalence of gender and age¹⁴. These results may be justified by the fact that the male population uses health services and preventive measures less frequently, leading them to seek medical care late, when they present manifestations of worsening diseases¹⁵. In addition, men have greater exposure to accidents and injuries due to external causes^{14,15}.

Regarding marital status, most were married and the self-reported skin color was brown, results that corroborate similar studies^{16,17}. Although most are married, there is a feeling of fear and insecurity regarding the partner, due to the new condition in which they find themselves physically, living with the stoma and the collecting equipment generate psychological and emotional problems, bringing feelings of shame and lack of sexual interest^{14,16}.

Regarding education and monthly family income, the results showed a situation of difficulty and social exclusion experienced by this clientele, which may make it impossible and difficult to acquire the materials needed for treatment as people with stomata, as well as basic life items, such as food, health, housing, education, leisure, and safety, which are indispensable to have QOL¹⁸. The results pointed out that people with education and high income had better QOL scores, in the same direction as a US study in which people with higher income had better QOL¹⁹.

With regard to education level, there was a predominance of low education, as in other similar studies^{14,16,20}. The low level of education is a worrisome factor when it comes to citizenship and rights, since the lower the level of knowledge, the more difficult it is to understand and learn about the health problem and the ability to assimilate guidelines for self-care²¹. However, it is important to emphasize that this variable is not an obstacle to the professional work with this population, because they have sought strategies for the translation of knowledge to this public through practical interaction and the use of a more accessible vocabulary, facilitating the comprehension of the treatment.

The predominantly catholic religious-spiritual bond was observed in the sample, as was the highest-scoring QOL domain. Spiritual support is extremely important in this phase of change and adaptation for people with stomata, because in it they find a source of resilience and coping with their physical and psychological problems related to the stoma²⁰.

Regarding the clinical data, the prevalent type of ostomy was colostomy, caused by intestinal cancer, and the majority was temporary. These findings were also found in previously conducted studies^{6,22}. Among the complications, the main ones cited were dermatitis and prolapse, similar to data found in other national research^{5,6,14,17}.

As for QOL, spiritual well-being was the domain with the best rated performance, and social well-being was the most compromised domain among people with stoma, in agreement with a study in the Chinese population²³. Our results did not indicate significant differences in QOL between men and women, but one study noted that women had lower scores compared to men²³. A recent systematic review pointed out that stomata negatively impact the QOL of this population, however there were no conclusive evidences that indicators such as age, gender, and length of treatment have a specific effect on the QOL of people with stomata, corroborating our findings²⁴.

The associations found between the indicators of basic sanitation and housing reflect the perception that people from lower socioeconomic conditions have about their QOL, this is due both to the low education and worse access to health services more evident in this social stratum^{14,20}, as well as may be related to the good fit of the ostomy, independent of other factors²⁵.

This study found significant associations between socioeconomic, demographic, clinical, and sanitation factors with the QOL of individuals with stomata. Having low income, low education, no sanitation services, and worse housing contributed to worse QOL scores for these individuals when compared to individuals with better income and education. This represents the need for more effective public policies that impact not only the treatment of the disease that caused the stoma, but that improve the socioeconomic conditions of the population.

From the perspective of social determinants in health, the QOL of the general population can be affected by sanitation and housing conditions, especially individuals living with stomata⁵. Factors related to living conditions, education, employment, availability of food, medicines, and access to health services are directly related to the health-disease process of this population, and indicate that socially disadvantaged people have different exposures and degrees of vulnerability to health risks.

Given this scenario, the importance of implementing public policies capable of guaranteeing minimum survival conditions and ensuring the human rights of citizenship for this population is emphasized, in view of the need

to resignify habits of life and care, requiring extra costs with medication, hygiene, proper food, transportation for treatment, and access to quality health services, in order to optimize their survival¹⁷.

Study limitations

The main limitation of the study was the convenience sample; however, studies with large samples for this public are not found in the literature, given the logistical and management difficulties of the stomata. Another limitation was the cross-sectional design, longitudinal studies with analyses of QOL before and after the stomata could bring more consistent findings.

Contributions to the field of nursing, health or public policy

Understanding the complications of stomata and demographic, clinical, and QOL factors can improve care for these users, prevent the development of complications, and help build more equitable lines of care with effective interventions aimed at reducing the negative impact of stoma on QOL.

CONCLUSION

Significant relationships were observed between the QOL of people with stomata and sociodemographic, lifestyle, sanitation, and housing indicators. Individuals with a worse social background had a worse QOL. This relationship corroborates previous studies and highlights the negative impact of stoma on key domains of QOL, such as social limitations.

AUTHOR'S CONTRIBUTION

Conceptualization: Ferreira BCS, Martins SS e Cavalcante TB; Methodology: Silva Junior JF; Research: Martins SS; Writing - First version: Ferreira BCS, Cavalcante TB e Silva Junior JF; Writing - Review & Editing: Silva Junior JF; Resources: Martins SS e Cavalcante TB; Supervision: Carneiro SCS.

AVAILABILITY OF RESEARCH DATA

All data were generated and analyzed in the present study.

FUNDING

Not applicable.

ACKNOWLEDGMENTS

We thank the University Hospital of the Federal University of Maranhão for the availability of the institutional databases for stratification of the study population and the data collection site.

REFERENCES

1. Colwell JC, Bain KA, Hansen AS, Droste W, Vendelbo G, James-Reid S. International Consensus Results: Development of Practice Guidelines for Assessment of Peristomal Body and Stoma Profiles, Patient Engagement, and Patient Follow-up. *J Wound Ostomy Continence Nurs.* 2019;46(6):497-504. <http://doi.org/10.1097/WON.0000000000000599>

2. Salomé GM, Lima JA, Muniz KC, Faria EC, Ferreira LM. Health locus of control, body image and self-esteem in individuals with intestinal stoma. *J Coloproctol*. 2017;37(3):216-24. <http://doi.org/10.1016/j.jcol.2017.04.003>
3. Silva CRDT, Andrade EMLR, Luz MHBA, Andrade JX, Silva GRF. Quality of life of people with intestinal stomas. *ACTA Paul Enferm*. 2017;30(2):144-51. <http://doi.org/10.1590/1982-0194201700023>
4. Silva JO, Gomes P, Gonçalves D, Viana C, Nogueira F, Goulart A et al. Quality of Life (QoL) Among Ostomized Patients – a cross-sectional study using Stoma-care QoL questionnaire about the influence of some clinical and demographic data on patients' QoL. *J Coloproctol*. 2019;39(1):48-55. <https://doi.org/10.1016/j.jcol.2018.10.006>
5. Oliveira IV, Silva MC, Silva EL, Freitas VF de, Rodrigues FR, Caldeira LM. Care and health of ostomy patients. *Rev Bras Promoç Saúde*. 2018;31(2):1-9. <http://doi.org/10.5020/18061230.2018.7223>
6. Salomé GM, Almeida SA, Mendes B, Carvalho MRF, Massahud Junior MR. Assessment of subjective well-being and quality of life in patients with intestinal stoma. *J Coloproctol*. 2015;35(3):168-74. <http://doi.org/10.1016/j.jcol.2015.03.002>
7. Zhang Y, Xian H, Yang Y, Zhang X, Wang X. Relationship between psychosocial adaptation and health-related quality of life of patients with stoma: A descriptive, cross-sectional study. *J Clin Nurs*. 2019;28(15-16):2880-8. <http://doi.org/10.1111/jocn.14876>
8. Nieves CB, Díaz CC, Celdrán-Mañas M, Morales-Asencio JM, Hernández-Zambrano SM, Hueso-Montoro C. Ostomy patients' perception of the health care received. *Rev Lat-Am Enfermagem*. 2017;25:e2961. <http://doi.org/10.1590/1518-8345.2059.2961>
9. Malta M, Cardoso LO, Bastos FI, Magnanini MMF, Silva CMFP. STROBE initiative: guidelines on reporting observational studies. *Rev Saude Publica*. 2010;44(3):559-65. <http://doi.org/10.1590/S0034-89102010000300021>
10. Grant M, Ferrell B, Dean G, Uman G, Chu D, Krouse R. Revision and psychometric testing of the City of Hope Quality of Life-Ostomy Questionnaire. *Qual Life Res*. 2004;13(8):1445-57. <http://doi.org/10.1023/B:QURE.0000040784.65830.9f>
11. Grant JS, Davis LL. Selection and use of content experts for instrument development. *Res Nurs Health*. 1997;20(3):269-74. [https://doi.org/10.1002/\(sici\)1098-240x\(199706\)20:3<269::aid-nur9>3.0.co;2-g](https://doi.org/10.1002/(sici)1098-240x(199706)20:3<269::aid-nur9>3.0.co;2-g)
12. Gomboski G. Adaptação cultural e validação do City Of Hope - Quality of Life - Ostomy Questionnaire para a língua portuguesa no Brasil [dissertação de mestrado]. São Paulo (SP): Escola de Enfermagem, Universidade de São Paulo; 2010.
13. Santos VLCC, Augusto FS, Gomboski G. Health-related quality of life in persons with ostomies managed in an outpatient care setting. *J Wound Ostomy Continence Nurs*. 2016;43(2):158-64. <http://doi.org/10.1097/WON.0000000000000210>
14. Miranda SM, Luz MHBA, Sonobe HM, Andrade EMLR, Moura ECC. Caracterização sociodemográfica e clínica de pessoas com estomia em Teresina. *ESTIMA*. 2016;14(1):29-35. <http://doi.org/10.5327/Z1806-3144201600010005>
15. Skube SJ, Lindgren B, Fan Y, Jarosek S, Melton GB, McGonigal MD et al. Penetrating Colon Trauma Outcomes in Black and White Males. *Am J Prev Med*. 2018;55(5 Suppl1):S5-13. Available at: <https://linkinghub.elsevier.com/retrieve/pii/S0749379718318804>
16. Moreira WC, Vera SO, Sousa GN, Araújo SNM, Damasceno CKCS, Andrade EMLR. Sexuality of patients with bowel elimination ostomy. *Rev Fund Care Online*. 2017;9(2):495-502. <http://doi.org/10.9789/2175-5361.2017.v9i2.495-502>
17. Mauricio VC, Souza NVDO, Lisboa MTL. Biopsychosocial determinants of the labor inclusion process of the person with a stoma. *Rev Bras Enferm*. 2014;67(3):415-21. <http://doi.org/10.5935/0034-7167.20140055>
18. Fernandes RM, Miguir ELB, Donoso TV. Perfil da clientela estomizada residente no município de Ponte Nova, Minas Gerais. *Rev Bras Colo-proctol*. 2010;30(4):385-92. <http://doi.org/10.1590/S0101-98802010000400001>
19. Pittman J, Rawl SM, Schmidt CM, Grant M, Ko CY, Wendel C et al. Demographic and clinical factors related to ostomy complications and quality of life in veterans with an ostomy. *J Wound Ostomy Continence Nurs*. 2008;35(5):493-503. <http://doi.org/10.1097/01.WON.0000335961.68113.cb>
20. Andrade RS, Martins JM, Madeiros LP, Souza AJG, Torres GV, Costa IKF. Aspectos sociodemográficos, clínicos e de autocuidado de pessoas com estomas intestinais. *Rev Enferm UERJ*. 2017;25:e19368. <http://doi.org/10.12957/reuerj.2017.19368>
21. Lenza NFB, Sonobe HM, Buetto L, Santos MG, Lima MS. The teaching of self-care to ostomy patients and their family: an integrative review. *Rev Bras Promoç Saúde*. 2013 [cited 2020 augo 23]; 26(1):139-45. Available at: <http://www.bioline.org.br/pdf?bh13034>
22. Aguiar JC, Pereira APS, Galisteu KJ, Lourenção LG, Pinto MH. Clinical and Sociodemographic Aspects of People With a Temporary Intestinal Stoma. *REME Rev Min Enferm*. 2017;21:e-1013. <http://doi.org/10.5935/1415-2762.20170023>
23. Geng Z, Howell D, Xu H, Yuan C. Quality of Life in Chinese Persons Living with an Ostomy: A Multisite Cross-sectional Study. *J Wound Ostomy Continence Nurs*. 2017;44(3):249-56. <http://doi.org/10.1097/WON.0000000000000323>

24. Vonk-Klaassen SM, Vocht HM, Ouden MEM, Eddes EH, Schuurmans MJ. Ostomy-related problems and their impact on quality of life of colorectal cancer ostomates: a systematic review. *Qual Life Res.* 2016;25(1):125-33. <http://doi.org/10.1007/s11136-015-1050-3>
25. Scardillo J, Dunn KS, Piscotty R. Exploring the relationship between resilience and ostomy adjustment in adults with a permanent ostomy. *J Wound Ostomy Continence Nurs.* 2016;43(3):274-9. <http://doi.org/10.1097/WON.0000000000000222>