






## Post-operative adaptation of people with ostomy with and without complication: comparative study

*Adaptação pós-operatória de pessoas com estomia com e sem complicação: estudo comparativo*

*Adaptación postoperatoria de personas con ostomía con y sin complicaciones: estudio comparativo*

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### ABSTRACT

**Objective:** to analyze postoperative adaptations by people with intestinal elimination ostomies, with and without complications, using the Elimination Ostomy Adaptation Scale. **Method:** this quantitative, prospective study investigate 56 people with ostomy at the late postoperative stage using a semi-structured questionnaire. The data were analyzed using non-parametric statistical tests. **Results:** 58.9% of participants were 54 to 69 years old, 41% had completed elementary school, 53.6% were married, 66% retired and 71.4% colostomized. The complications affecting 48.2% included dermatitis in 19.6%. On the adaptation scale, the overall average was 144.7. The highest scoring dimensions were self-care (18.8) and self-concept (42.5); and lowest, sexual interaction (15.1). The social/religious support domain was found to differ significantly between groups ( $p = 0.031$ ). **Conclusion:** a significant part of the study population had complications and was less adapted to the ostomy. Early assessment can be a strategy for preventing complications.

**Descriptors:** Nursing; Ostomy; Postoperative Complications; Adaptation; Postoperative Care.

### RESUMO

**Objetivo:** analisar as adaptações pós-operatórias de pessoas com estomias intestinais de eliminação com e sem complicação a partir da Escala de Adaptação a Ostomia de Eliminação. **Método:** estudo de abordagem quantitativa, prospectiva, com 56 pessoas com estomia em pós-operatório tardio. Utilizou-se questionário semiestruturado. Os dados foram analisados a partir de testes estatísticos não-paramétricos. **Resultados:** a maioria dos participantes possuía entre 54 e 69 anos (58,9%), ensino fundamental completo (41%), casados (53,6%), aposentados (66%) e colostomizados (71,4%). Do total, 48,2% apresentaram complicações relacionadas a estomia, como dermatites (19,6%). Na escala de adaptação, a média geral foi 144,7. As dimensões que apresentaram maior pontuação foram autocuidado (18,8) e autoconceito (42,5); e menor pontuação, interação sexual (15,1). O domínio suporte social/religioso mostrou-se significativamente diferente entre os grupos ( $p=0,031$ ). **Conclusão:** Um quantitativo relevante da população possuía complicações e mostrou-se menos adaptado a estomia. Avaliação precoce pode ser uma estratégia para prevenção de complicações.

**Descritores:** Enfermagem; Estomia; Complicações Pós-Operatórias; Adaptação; Cuidados Pós-Operatórios.

### RESUMEN

**Objetivo:** analizar las adaptaciones postoperatorias de personas con ostomías de eliminación con y sin complicaciones, utilizando la Escala de adaptación a la Ostomía de Eliminación. **Método:** estudio de enfoque cuantitativo, prospectivo junto a 56 personas con ostomía en postoperatorio tardío. Se utilizó un cuestionario semiestructurado. Los datos se analizaron mediante pruebas estadísticas no paramétricas. **Resultados:** La mayoría de los participantes tenía entre 54 y 69 años (58,9%), terminó la escuela primaria (41%), casados (53,6%), jubilados (66%), tenía colostomía (71,4%). Del total, el 48,2% presentó complicaciones relacionadas con la ostomía, como dermatitis (19,6%). En la escala de adaptación, el promedio general fue de 144,7. Las dimensiones que obtuvieron mayor puntuación fueron el autocuidado (18,8) y el autoconceito (42,5); y menor puntuación, interacción sexual (15,1). Se demostró que el apoyo social / religioso era significativamente diferente entre los grupos ( $p = 0,031$ ). **Conclusión:** una porción significativa de la población presentó complicaciones y estaba menos adaptada a la ostomía. La evaluación temprana puede ser una estrategia para prevenir complicaciones.

**Descriptores:** Enfermería; Estomía; Complicaciones Posoperatorias; Adaptación; Cuidados Posoperatorios.

## INTRODUCTION

A significant number of stomized people have one or more complications related to the stoma in their lifetime. This fact hinders the person's self-care ability, consequently generating psychosocial problems, as well as increase in the number of morbidities and in the associated health costs<sup>1</sup>.

Performing a stoma influences several factors that contribute to the well-being of these individuals, including physical, emotional and sociocultural changes in the person's life. Such changes significantly alter their body image modifying the psychological functions and influencing sexual activity and sexuality, in addition to self-esteem, which

may not be successful depending on the adaptive dynamics. Therefore, it is indispensable that the trained nurse or stomatherapist welcomes and guides the person and their family efficiently and effectively, as well as that they implement actions and care measures aimed at minimizing the negative factors, thus improving the quality of life of these people<sup>2,3</sup>.

The individual is a holistic system in which, through stimuli such as death, stress, disease and happiness, uses bodily systemic mechanisms in order to maintain adaptation. Regarding the person with a stoma and correlating with the adaptation theory, the health professional must recognize the body changes resulting from performing a stoma, making the stomized person develop skills to overcome the situation<sup>4</sup>.

Although there is a considerable number of studies that address the complications experienced by people with a stoma, mainly addressing strategies for the guidance and monitoring of these people, with regard to factors associated with complications in the stoma and peristomal skin, which often contribute significantly to the adaptive process, few studies address the use of adaptation scales in the face of these complications<sup>5,6</sup>.

Given this issue, the present study aimed at: Analyzing the postoperative adaptations in people with intestinal elimination stomas with and without complications using the Elimination Stoma Adaptation Scale.

## THEORETICAL FRAMEWORK

In Brazil, for every person with a stoma, there are national guidelines that guarantee comprehensive health care through ordinance No. 400 of November 16<sup>th</sup>, 2009. This ordinance defines that the health care of people with stomas is composed of actions developed in primary care and in the health care services for stomized people, in which actions will be carried out to guide self-care and prevention of complications in the stomas<sup>7</sup>.

Complications related to the stoma can be early or late. The former, which can occur within 30 days after its performance, include bleeding, hematoma formation, stoma edema and skin irritation, sometimes with ulceration. Late complications, on the other hand, are those that occur after 30 days postoperatively and can include prolapse, retraction, stenosis and parastomal hernia<sup>8</sup>.

Understanding the existence of complications in people with stomas is crucial for nurses to be able to prevent or treat them. The identification of risk factors for the development of complications of the stoma and peristomal skin allows nurses to early identify people in conditions of greater vulnerability to these complications, in which, when recognizing early, nurses can act in an anticipatory way, defining an intervention plan sensitive to this problem, which allows them to prevent its development or to detect the stoma early if it occurs<sup>1</sup>.

With regard to the person with a stoma and correlating with the theory, nurses need to recognize the body changes resulting from performing a stoma and the potential complications. They also need to encourage family and professional support to provide quality care in view of the specific adaptations of each individual and the new impulses triggered by the surgical procedure. Thus providing, adaptation to overcome the situation to the stomized person<sup>4</sup>.

## METHOD

An exploratory, quantitative and cross-sectional study, carried out in September and October 2020 in an outpatient clinic for stomized people of a Federal Hospital located in Rio de Janeiro. A total of 56 individuals participated in the study in the postoperative period of having performed an intestinal stoma, who met the following inclusion criteria: being 18 years old or older; being in the late postoperative period (15 days) of having performed an intestinal stoma, and having preserved cognitive and communicational conditions. The exclusion criteria were patients who presented relapsed stoma surgery.

The participants answered a semi-structured instrument, applied by the Nursing residents linked to the institution and previously trained. Data collection was carried out at a single moment, after the follow-up outpatient Nursing consultation carried out together with the sector nurses. Data collection took place during the clinic's working hours, from Monday to Friday in the morning and afternoon shifts.

Together with the semi-structured data collection instrument, the Elimination Stoma Adaptation Scale (ESAS) was used, which has six domains focus: Self-concept, Positive Acceptance, Social/Religious Support, Sexual Interaction, Self-Care and Negative Acceptance, in which 35 items are evaluated. Of the total, 33 items were operationalized on a 7-point Likert scale, ranging from 1=strongly disagree to 7=strongly agree. For 2 items, a 6-point

Likert scale was associated, from 1=never to 6=always. The ESAS scale has a minimum score of 35 points and a maximum score of 243 points<sup>9</sup>.

The six domains are divided as follows: I- Self-concept, domain related to the participation of living with family members and friends after a stoma and the individuals' perception of themselves. II- Positive acceptance, domain related to positive thinking in relation to satisfaction with appearance, acceptance of the stoma, well-being and pleasure in living. III- Social/Religious support, related to the individuals' affective and social network and on their spiritual beliefs. IV- Sexual interaction, domain related to the understanding of satisfaction with sexual life, intimacy and sexual interest in the post-surgery. V- Self-care, it aims at understanding the search for the development of habits aimed at one's own well-being and the identification of the harms caused. VI- Negative acceptance, domain related to the feeling of non-acceptance of the stoma<sup>9</sup>.

Google Forms<sup>®</sup> was used to create the online questionnaire and build the database in Excel 2016. Data analysis was performed in R 4.0.2 (statistical programming language software), with application of non-parametric statistical tests for independent samples and the respective variables of interest. Thus, the Mann-Whitney test was used, applying the chi-square test and Fisher's exact test to verify whether there is an association between two categorical variables.

The research was submitted to and approved by the Research Ethics Committee of the institution involved, following the ethical standards, based on resolutions No. 466 of 2012 and No. 510 of April 7<sup>th</sup>, 2016<sup>10</sup>. All the participants signed a Free and Informed Consent Form (FICF).

## RESULTS

A total of 56 individuals participated in the study, with sociodemographic data presented in Table 1.

**TABLE 1:** Sociodemographic profile of people with intestinal elimination stomas (n=56). Rio de Janeiro, RJ, Brazil, 2020.

Variable	n	f(%)
<b>Gender</b>		
Male	28	50
Female	28	50
<b>Age</b>		
22-37	03	5,4
38-53	08	14.3
54-69	33	58.9
≥70	12	21.4
<b>Marital status</b>		
Married	30	53,6
Single	19	33.9
Widowed	07	12.5
<b>Employment status</b>		
Retired/Pensioner	37	66
Employee	10	17.9
Unemployed	09	16.1
<b>Schooling</b>		
Illiterate/Incomplete Elementary School	09	16.1
Complete Elementary School	23	41.0
Complete High School	17	30.4
Complete Higher Education	07	12.5
<b>Considers himself/herself religious</b>		
Yes	52	92.9
No	04	7.1
<b>Religion</b>		
Catholic	29	56,9
Evangelical and other religions	22	43.1
Not reported	05	0

Regarding the sociodemographic profile, there was equality between the gender of the participants, aged between 54 and 69 years old (58.9%), married (53.6%), retired/pensioners (66%) and with complete primary education (41%). The vast majority considered themselves religious (92.9%), with the Catholic religion being the most prevalent (56.9%).

The variables related to the stomas are presented in Table 2.

**TABLE 2:** Variables related to intestinal elimination stomas (n=56). Rio de Janeiro, RJ, Brazil, 2020.

Variable	n	f(%)
<b>Type of elimination stoma</b>		
Colostomy + others	40	71,4
Ileostomy	16	28.6
<b>Stoma temporality</b>		
Temporary	24	42.9
Definitive	23	41
Undetermined	09	16.1
<b>Time since performance (months)</b>		
≤ 01 year	25	44.6
Up to 02 years	09	16.1
> 02 years	22	39.3
<b>Late complication</b>		
Yes	27	48,2
No	29	51.8
<b>Complications</b>		
Dermatitis	11	19.6
Stenosis	02	3.6
Granuloma	06	10.7
Parastomal hernia	05	8.9
Loop prolapse	04	7.1
Retraction	07	12.5
Bleeding	01	1.8
Peristomal varicose	01	1.8

The most prevalent type of elimination stoma was colostomy (71.4%), with time since performance of less than or equal to one year (44.6%), with temporality classification as temporary (42.9%). With regard to the percentage of late complications, 51.8% had no complications and 48.2% presented complications. The most prevalent complication was dermatitis (19.6%).

The results obtained in the evaluation using the Elimination Stoma Adaptation Scale are shown in Table 3.

In the Positive Acceptance domain, average adaptation was obtained, with a score of 34.4 in a domain with a minimum score of 08 and a maximum of 56 points. The mean of answers by people with and without complications was 36.1 and 32.8 respectively, showing to be close with a slight variation. In Social/Religious Support, an almost intermediate adaptation was identified (21). The mean adaptation of people with complications (22.5) was slightly higher than in those who did not present them (19.7). The Social/Religious Support domain was significantly different between the groups (p=0.031).

With regard to Sexual Interaction, a score of 15.1 was obtained, a result below the mean, which represents low adaptation in this category. People with and without complications presented values of 14.6 and 15.7, respectively, showing better adaptation in patients without complications. The Self-care category obtained 18.8 points in a domain with a possible score from 04 to 26, showing a high level of adaptation in the participants. The participants who did not have complications obtained higher scores (19). Negative acceptance scored 12.8 points, which shows low adaptation of this population in this class. The group that did not have complications was more relevant in this category (13.7 points).

**TABLE 3:** Correlations of the domains of the Elimination Stoma Adaptation Scale from the analysis between the groups with (n=27) and without (n=29) complications. Rio de Janeiro, RJ, Brazil, 2020.

Domain	Complication		Total	P - Value
	Yes	No		
<b>I. Self-concept (Min: 9. Max: 63)</b>				0.792
Mean (Standard Deviation)	42.8 (8.80)	42.3 (8.77)	42.5 (8.71)	
Minimum. Maximum	27. 57	27. 57	27. 57	
<b>II. Positive acceptance (Min: 8. Max: 56)</b>				0.202
Mean (Standard Deviation)	36.1 (8.34)	32.8 (7.37)	34.4 (7.96)	
Minimum. Maximum	22. 55	21. 46	21. 55	
<b>III. Social/Religious Support (Min: 5. Max: 35)</b>				0.031*
Mean (Standard Deviation)	22.5 (5.52)	19.7 (5.17)	21 (5.48)	
Minimum. Maximum	11. 35	15. 35	11. 35	
<b>IV. Sexual interaction (Min: 5. Max: 35)</b>				0.516
Mean (Standard Deviation)	14.6 (6.13)	15.7 (5.89)	15.1 (5.98)	
Minimum. Maximum	4. 26	4. 29	4. 29	
<b>V. Self-care (Min: 4. Max: 26)</b>				0.987
Mean (Standard Deviation)	18.6 (3.56)	19 (3.15)	18.8 (3.33)	
Minimum. Maximum	10. 26	12. 26	10. 26	
<b>VI. Negative acceptance (Min: 4. Max: 28)</b>				0.151
Mean (Standard Deviation)	11.9 (4.64)	13.7 (4.11)	12.8 (4.43)	
Minimum. Maximum	3. 21	2. 21	2. 21	
<b>Total score (Min: 35. Max: 243)</b>				0.617
Mean (Standard Deviation)	146.4 (22.15)	143.1 (18.90)	144.7 (20.41)	
Minimum. Maximum	98. 198	106. 174	98. 198	

(\*) Significant result with  $p < 0.05$ .

In relation to the Self-concept domain, there was a mean score of 42.5, and it can be verified that, in relation to this aspect, the participants showed positive results. Regardless of whether or not there were complications in the stoma or peristomal skin, the participants presented similar values with regard to adaptation (42.8 and 42.3), respectively.

## DISCUSSION

Regarding the sociodemographic issue, other research studies identified similar results with regard to age over 54 years old, the retired/pensioner employment category, married marital status and schooling with complete primary education. The vast majority considered themselves religious, belonging to Catholicism. Regarding the characteristics related to the stoma, colostomy was the prevalent type against ileostomy, also observed in other studies<sup>11-12</sup>.

In contrast to data related to previous studies, in which most of the participants had a colostomy with a permanent stay and with a stay of more than two years, we found contrary data<sup>13</sup>: there was a relevant number of temporary stomas. A study carried out in a laboratory center in the capital of Piauí identified data similar to those found, in which the vast majority of the participants (28.1%) had dermatitis related to the stoma<sup>11</sup>.

According to previous studies on the Nursing diagnosis of low self-esteem in people with stomas, their frequency was present in part of the sample (23.3%)<sup>14</sup>. This issue can be justified since, with performance of the stoma, the individuals are faced with changes in their physical, psychological and emotional planes, with self-esteem being defined as the individual's perception of their own value, and this perception is derived from their own body image, society's acceptance of the being, their physical and emotional well-being and their adaptability<sup>14,15</sup>.

Scholars who evaluated the perception of people with intestinal stomas identified negative perceptions of some participants, in which some of their speeches revealed the difficulty of some patients adapting to the collecting equipment provided, an issue that can lead to non-adaptation of the person with a stoma<sup>5</sup>.

The Self-care domain showed good adaptation by the participants, which can be related to the care provided in the outpatient clinic for the care of stomized people. A number of scholars have highlighted the importance of the nurse as a health promoter in this scenario, being a facilitator in the learning process of stomized people and their families/caregivers, by developing self-care teaching strategies, contributing to the patient's autonomy<sup>5</sup>.

In a research study carried out by the Federal University of Ceará with stomized people, a positive point about the quality of life and the impact on the physical dimension that stood out was the improvement in the clinical condition, after implantation of the stoma, showing a positive adaptation. On the other hand, some patients turned to social isolation caused by the lack of physical adaptation to the new reality<sup>16</sup>.

In a study that deals with the perceptions of stomized patients in terms of social impact, there was variation of this perception to positive, when the individuals stated that they had become accustomed to the stoma from the beginning. It was also observed that the spiritual influence shows the prospect of improving the quality of life of these people, with the support of a divine entity, while in other reports, these patients thank God for the improvement in their quality of life or for the support they had to overcome the difficulties that arose after the surgery<sup>16</sup>.

Although self-concept was well adapted in this study, in another one, opposite results were identified in which part of the participants turned to social isolation. Many stomized people preferred to avoid going out, for fear of accidents with the bag, in addition to being ashamed of the device<sup>15</sup>.

Regarding sexual interaction, the adaptive process proved to be ineffective. Data corroborate this identification in which the reduction of sexual activity after performing the stoma in previously sexually active people<sup>17</sup>.

The Nursing consultation, as an exclusive care activity of the nurse, can be considered fundamental, as it leads to the identification of health problems, diagnosis, care planning, interventions and assessment of the resolvability of each person, with the possibility of resuming the steps towards care effectiveness. It also leads to preventive and educational actions, thus constituting an important technological tool for comprehensive care<sup>18</sup>.

It is important to give visibility to the importance of the Nursing consultation as a means to implement the Nursing Process, focusing on the person with a stoma, using an evaluative instrument regarding the adaptation of this population to the stoma, which favors identification of health problems, thus reducing psychosocial and biological implications.

The Nursing consultation in Stomatherapy is specifically essential to help achieve self-care, so the person with a stoma must be monitored because rehabilitation is directly related to the individualized care of their needs<sup>19</sup>.

### Study limitations

The study presented as a limitation the reduction in the number of affected patients, due to the delicate moment of the pandemic caused by COVID-19, which led to closure of the clinic and prioritization of care for more severe patients.

### CONCLUSION

A relevant percentage of the population had complications and was less adapted to the stoma. In part of the scale dimensions (sexual interaction, self-care and negative acceptance), people with uncomplicated stomas presented better adaptation, showing that the stoma-related complications interfere negatively in this process. The group with complications had higher scores in the categories aimed at positive acceptance and social/religious support, that is, they presented greater acceptability of the stoma, showing to be optimistic.

However, when comparing the groups with and without complications, the adaptive process of the participants in general was not significantly different, showing that the stoma-related complications do not seem to interfere with regard to the subjects' adaptation.

This study shows the importance of nurses in caring for people with stomas through the use of evaluative scales, an activity responsible for evaluating and planning the best behaviors with regard to adaptation, self-care, acceptability of the stoma and reduction of health problems.

New studies on the subject matter are suggested, with clinical monitoring and application of the scale to other populations.

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