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Association of sociodemographic and clinical factors with spirituality and hope for cure of ostomized people

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ABSTRACT

Objective: To evaluate the sociodemographic and clinical factors related to patients with intestinal stoma and correlate them to the health locus of control, spirituality and hope for a cure.

Method: This study was conducted at the Polo of Ostomized Patients of the city of Pouso Alegre, Minas Gerais. Participants were 52 patients with intestinal stoma. The scale for Health Locus of Control, the Herth Hope Scale, and the Self-rating Scale for Spirituality were used for data collection.

Results: The patients were aged up to 50 years, with the following means: Herth Hope Scale: 17.53; Self-rating Scale for Spirituality: 19.33. With regard to marital status, single people had a mean of 21.00 for the Herth Hope Scale. Retired ostomized patients had a mean of 20.53 for the Herth Hope Scale, of 10.38 for the Self-rating Scale for Spirituality, and of Scale for Health Locus of Control, of 18.79. The patients whose cause of making the stoma was neoplasia attained a mean of 19.43 for the Self-rating Scale for Spirituality. Regarding the character of the stoma, the mean for the Herth Hope Scale was 18.40. In the ostomized individuals who lived with the stoma for less than four years the means for the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control were 17.39, 20.35, and 23.09, respectively. Patients who did not participate of an association or support had means for the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control of 19.08, 17.25, and 20.63 respectively.

Conclusion: Ostomized patients believe they can control their health and that those involved in their care and rehabilitation can contribute to their improvement.

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Associação dos fatores sociodemográficos e clínicos com a espiritualidade e esperança de cura dos ostomizados

Palavras-chave:
Estoma intestinal
Controle interno-externo
Espiritualidade
Religiosidade
Esperança

RESUMO

Objetivo: Avaliar os fatores sociodemográficos e clínicos relativos aos pacientes com estoma intestinal e correlacioná-los ao *locus* de controle da saúde, espiritualidade e esperança de cura.

Métodos: Este estudo foi realizado no Polo dos Ostomizados da cidade de Pouso Alegre, Minas Gerais. Fizeram parte do estudo 52 pacientes com estoma intestinal. Foram utilizados para coleta de dados a Escala para *Locus* de Controle da Saúde; Escala de Esperança de Herth, e Self-rating Scale for Spirituality.

Resultados: Os pacientes na faixa etária até 50 anos tiveram as seguintes médias: Herth Hope Scale: 17,53; Self-rating Scale for Spirituality: 19,33. No que concerne ao estado civil, as pessoas solteiras tiveram a média de 21,00 para a Escala de Esperança de Herth. Os ostomizados aposentados atingiram as seguintes médias para as escalas: Escala de Esperança de Herth: 20,53; Self-rating Scale for Spirituality: 10,38 e Escala para *Locus* de Controle da Saúde: 18,79. Os pacientes cuja causa da confecção do estoma foi neoplasia tiveram a média de 19,43 para a Self-rating Scale for Spirituality. Com relação ao caráter do estoma, a média da Escala de Esperança de Herth foi 18,40. Nos ostomizados que conviviam com o estoma havia menos de 4 anos as médias das Escalas de Esperança de Herth, Self-rating Scale for Spirituality, e Escala para Locus de Controle da Saúde foram de 17,39, 20,35, e 23,09, respectivamente.

Conclusão: os pacientes ostomizados acreditam que podem controlar sua saúde e que as pessoas envolvidas no cuidado e na sua reabilitação podem contribuir para sua melhora.

Introduction

When the patient is subjected to an ostomy and goes through a surgical procedure, the physician performs the externalization of a hollow organ such as the bowel or bladder, through a hole in the abdomen, called stoma.[1–3] This procedure is carried out in order to maintain the elimination function, provoking various changes, among which we can highlight the removal of gases, odors and feces through the stoma that is located on the abdomen. Thus, there is a change in body image, sexuality and in the way of dressing, affecting interpersonal relationships and impacting negatively on the physical, psychological, social and sexual health of the individual who must live with this life condition.[2–5]

These changes that occur in the daily life of ostomized people, and even the psychosocial, emotional and biological changes, may lead these individuals to a loss of control of elimination and to the need to use of collector equipment for feces and/or urine, which causes a change in the individual's body image. Thus, a constant fear arises, of not being able to resume the activities of daily living prior to the stoma, with consequent social isolation, a negative financial commitment, and psychological distress. Given this situation, the patient often loses his/her faith and hope to get a better health, becoming doubtful as to whether he/she will be able to perform self-care, especially in terms of stoma cleaning and bag exchanging.[1,6–11]

Often the patient ends up having a change in his/her religiousness, losing faith and any hope of cure or improvement, for fear of not being able to do self-care, including cleaning the peristomal skin and exchanging and cleaning the bag. This fact has, as a consequence, changes in quality of life, self-esteem, spirituality, self-image, sexuality, family and social life and leisure activities.

Spirituality can be defined as a belief system that includes intangible elements that convey vitality and meaning to life events. Such a belief can mobilize extremely positive energies and initiatives, with an unlimited potential to improve the person's quality of life. Religious people are physically healthier, have more healthful lifestyles and require less health care. There is an association between spirituality and health, which is probably valid and possibly causal. It is fully recognized that the health of individuals is determined by the interaction of physical, mental, social and spiritual factors.[12,13]

Hope is a state associated with a positive outlook for the future, a way to cope with the situation that one is experiencing,[14,15] in which the individual has faith and the hope of his/her cure or improvement. Hope induces the individual to act and gives strength to solve problems and confrontations, such as loss, tragedy, loneliness and suffering.[16]

Health locus of control is a set of beliefs that individuals lay at the source of control of usual behaviors or events that occur to themselves or to the environment in which they are inserted, indicating the existence of a control of internal-external reinforcement, with regard to the degree to which the individual believes that the reinforcements are contingent on his/her conduct.[17,18]

The construct "health locus of control" is designed as a multidimensional variable. External beliefs can be divided into random expectations (the reinforcement would be determined by luck, by fate) and expectations that the

reinforcements would be dependent on the action of powerful others (such as family, teachers or doctors). The subjects who believe that powerful others control their lives can act differently, in comparison with those who believe that the events of their lives emerge chaotically and unpredictably.[19,20]

The evaluation of the health locus of control and spirituality and hope of cure can become an essential instrument in guiding health actions for ostomized people, considering that this provides subsidies for a better understanding of the psychosocial and emotional factors involved with the difficulties of living with the stoma and in the achievement of self-care.

In a context of complexity and problems with which the ostomized individual must deal, the study of aspects of health control, by the individual, about his/her spirituality level and hope of cure will provide relevant information which may influence the self-care by the ostomized individual, helping in his/her acceptance of being an ostomized patient and in living with the stoma. Thus, this study aims to evaluate sociodemographic and clinical factors linked to patients with an intestinal stoma, correlating these factors to the health locus of health control, spirituality, and hope of a cure.

Methods

This is a descriptive, cross-sectional analytical study.

This study was conducted at the Polo of Ostomized People in the city of Pouso Alegre, Minas Gerais. 52 patients with intestinal stoma were included.

The inclusion criteria were age ≥18 years and being an intestinal stoma carrier, and exclusion criteria were patients with dementia syndromes and other conditions that could prevent them from understanding and answering to the questionnaires.

Data were collected after approval by the Ethics Committee on Research of the Faculdade de Ciências da Saúde "Dr. Jose Antonio Garcia Coutinho" and after the Free and Informed Consent Form was signed by the patient or his/her caregiver (opinion number: 620462). Data were collected by the researchers themselves. The inclusion of the patient in the study followed the order of arrival at the outpatient clinic. The sample was selected in a non-probabilistic, by convenience, way.

For data collection, three questionnaires were applied: first, a questionnaire on demographic and stoma-related data; then the Scale for Health Locus of Control; the third questionnaire was the Herth Hope Scale and, finally, the Self-rating Scale for Spirituality. Each interview lasted approximately 25 min.

The Scale for Health Locus of Control has been translated and validated for the Portuguese language. The instrument validation, after application in four samples, was verified as to the reliability (internal consistency) through Cronbach's alpha, and the values found for the subscales were: *Internality for health*, 0.62–0.71; *Externality-chance for health*, 0.51–0.78; and *Externality- powerful others*, 0.62–0.67. This scale consists of three subscales, each containing six items regarding the following dimensions: *Internality for health* (items 1, 6, 8, 12, 13 and 17), wherein the scores reflect the degree to which the subject believes that he/she himself controls his/her state of health; *externality-powerful others for health* (items 3, 5, 7, 10, 14 and 18), wherein the scores reflect the degree to which the subject believes that other persons or entities (doctors, nurses, friends, family, God, etc.) can control his/her health; and *Externality-chance for health* (items 2, 4, 9, 11, 15 and 16), in which the scores indicate the degree to which a person believes that his/her health is controlled at random, without his/her interference or the interference from other people The scores for each dimension range from 1 to 5; for the alternatives "I totally agree," "I partially agree," "I am undecided," "I partially disagree," and "I strongly disagree," the following values are respectively added: 5, 4, 3, 2, and 1. The score obtained for the dimensions will be the sum of the items of the subscale at issue. The total value of items belonging to each of the three subscales represents the total scores with respect to the dimension of the health locus in question. The total amount obtained from each subscale may vary between 6 and 30 and indicates that the higher the value, the stronger the belief in this dimension. The scale is presented in its entirety, in which the items of the subscales are interleaved.[14,21]

The *Escala da Esperança de Herth* (EEH), that is, the Portuguese version of the Herth Hope Scale, is a tool which consists of 12 items with a total score of 12–48 points, with responses produced in a Likert-like scale, with scores from 1 to 4 points for each one of these items. The higher the score, the greater the hope. The items 3 and 6 have an inverted score.[20,22]

The Self-rating Scale for Spirituality is a self-report instrument consisting of six items that assess aspects of the individual's spirituality. Respondents must mark one of five options ranging from 1 – "I strongly agree," 2 – "I agree," 3 – "I partially agree," 4 – "I disagree," and 5 – "I strongly disagree;" and the answers should be produced according to the individual's perception at the time of answering the questions. For its use, one must sum up the points, whose total range from 6 to 30. To do this, one must previously recodify each item of this instrument (for example, a score = 5 becomes 1, 2 becomes 4, and so on). The recoded responses are summed to produce the total score, and this, in turn, represents the level of spiritual guidance. To make a comparison of scores between groups, one should work with the averages obtained in each group, applying an appropriate statistical test to check for differences between them. The summing of items allows the reading of scores, that is, the higher the score, the higher the levels of spiritual guidance. The items in this scale refer to a divine intervention in the patient's daily life and the practice of religious rituals, like praying. This scale, which evaluates the levels of spirituality, was validated in Brazil. The scale reliability test involving the two scales had a Cronbach's alpha coefficient of 0.86, a value which was considered acceptable, which validates its use in the Brazilian context.[23,24]

In the assessment of the results, data were entered and analyzed using the statistical program SPSS v. 8.0. For data analysis, the following statistical tests were used: for the distribution of absolute (n) and relative (%) frequencies, Pearson's chi-squared test was used, which determined whether the distribution was different from 5%, that is, $p < 0.05$. The comparison between two groups was performed using the Mann–Whitney test; and when there were more than two groups, the Kruskal–Wallis test was used. For the correlation of continuous with semi-continuous variables, the Spearman's correlation test was used.

Results

Regarding socio-demographic data, for the 52 ostomy patients seen at the Polo of Ostomized Patients of the city of Pouso Alegre, we found that 33 (63.50%) were female, mean age 67 years; 35 (67.40%) were married; 34 (65.40%) were retired and 40 (76.90%) of the patients were participants attending to support groups or associations. As to data related to the stoma, 40 (76.90%) were a result of neoplasia, 44 (84.60%) of them were of the colostomy type, 40 (76.90%) were permanent stomas having a diameter between 20 and 40 mm, and 39 (75%) were two-piece devices. Thirty-one patients (51.70%) lived with the stoma for up to 4 years.

Table 1 lists the means of the total score of the scales used in this study: for the Scale for Health Locus of Control, 19.53; for the Herth Hope Scale, 38.27; and for the Self-rating Scale for Spirituality, 23.67, with difference statistically significant. Regarding the dimensions of the Scale for Health Locus of Control, changes in mean total score were noted for the dimensions *Externality-chance for health*, 11.48; and *Externality-powerful others*, 19.48. Differences statistically significant were noted between dimensions. These findings imply that the individuals who participated in the study do not believe that professionals or other people involved in the care can control their health; on the other hand, they believe that they themselves control their health. But they believe that the improvement of health or their cure can depend on divine intervention.

Table 2 lists the mean of the total scores of the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control. With regard to socio-demographic data, the variables that showed changes were: patients aged up to 50 years, with the following means: Herth Hope Scale: 17:53, and Self-rating Scale for Spirituality: 19:33. Regarding marital status, single people had a mean of 21.00 for the Herth Hope Scale. Retired ostomized patients presented the following means: Herth Hope Scale: 20.53; Self-rating Scale for Spirituality: 10:38, and Scale for Health Locus of Control: 18.79. These findings mean that ostomized patients who were single, retired, and aged up to 50 years do not believe in divine intervention to obtain improvement or cure. The statistical differences were mixed. However, retired ostomized patients also do not believe that the professionals involved in the care of their health can contribute to their improvement.

Table 3 lists the means of the dimensions of the Scale for Health Locus of Control related to sociodemographic variables. The dimensions that exhibited changes were: for ostomized patients aged up to 50 years: *Externality-powerful others*, mean 18.73, and *Externality-chance for health*: 10.40. Also for the dimension *Externality-chance for health*, alterations were found in the means for the following variables: single (unmarried) patients: 15.12; widowers, 19.80; retirees, 8.79; 19.83. Changes in the mean occurred only in the dimension *Externality-chance for health*.

These findings imply that individuals aged up to 50 years believe that their improvement or cure depends on other people (family members, caregivers, health professionals) and on themselves. But single, widowed, unemployed, or retired ostomized patients do not believe that their improvement or cure depends on external assistance, or that there may be interference from others (family members, caregivers, health professionals).

Table 4 lists the means of the total score of the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control in relation to intestinal stoma data. Variables that showed changes were: patients for whom the cause of making the stoma was neoplasia, with a mean of 19.43 in the Self-rating Scale for Spirituality. Regarding the character of the stoma, the mean of the Herth Hope Scale was 18.40. For ostomized patients living with the stoma for less than 4 years, the mean of the Herth Hope Scale was 17.39; Self-rating Scale

Table 1 – Results obtained for mean scores of the Scale for Health Locus of Control, Herth Hope Scale, and Self-rating Scale for Spirituality, and the means of the Scale of Dimensions for Health Locus of Control in individuals with intestinal stoma seen at the Polo of Ostomized Patients of the city of Pouso Alegre.

Instrument	*p*-Value	Mean	Median	Standard deviation	Minimum	Maximum
Total score of the Scale for Health Locus of Control	0.007	19.53	19.0	2.114	20.53	19.0
Total score of the Herth Hope Scale		38.27	38.0	3.515	32	47
Total score of the Self-rating Scale for Spirituality		23.67	24.5	5.279	11	30
Total score of the dimensions of the Scale for Health Locus of Control	*p*-Value	Mean	Median	Standard deviation	Minimum	Maximum
Dimensions of the Scale for Health Locus of Control						
1-Internality for health	0.027	22.48	22.5	2.646	16	28
2-Externality-powerful others		11.48	14.0	2.222	12	29
3-Externality-chance for health		19.48	20.0	4.881	10	30

Pearson's Chi-squared test, Mann–Whitney test and Kruskal–Wallis test. Statistical significance $p \leq 0.05$.

Table 2 – Means for total scores of the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control, for the health locus of control related to socio-demographic data of patients with intestinal stoma seen at the Polo of Ostomized Patients of the city of Pouso Alegre.

Instrument	Age group									
	≤50 years			51–69 years			>70 years			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Herth Hope Scale	17.53	18.0	3.980	39.00	39.0	3.671	38.06	38.0	2.883	0.040[a]
Self-rating Scale for Spirituality	19.33	20.0	7.355	24.20	25.0	4.312	25.12	25.0	3.426	0.010[a]
Scale for Health Locus of Control	30.60	30.0	8.798	63.05	64.5	6.581	63.29	64.0	8.809	0.581

Instrument	Gender						
	Male			Female			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Herth Hope Scale	21.84	22.0	2.588	22.85	23.0	2.647	0.808
Self-rating Scale for Spirituality	22.79	22.0	3.809	19.15	18.0	4.280	0.027
Total locus of the Scale for Health Locus of Control	21.11	21.0	4.841	18.55	20.0	4.724	0.021[a]

Instrument	Marital status									
	Single			Married			Widow(er)			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Herth Hope Scale	21.00	28.0	8.725	23.77	25.0	7.999	61.78	64.0	7.480	0.017[a]
Self-rating Scale for Spirituality	18.00	19.5	4.106	38.29	39.0	3.569	38.44	38.0	3.127	0.050[a]
Total locus of the Scale for Health Locus of Control	20.25	22.0	6.964	63.11	63.0	5.042	26.33	25.0	2.739	0.967

Instrument	Scholarship						
	Fundamental education unfinished			Fundamental education completed			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Herth Hope Scale	24.04	24.0	7.183	23.25	25.0	8.854	0.533
Self-rating Scale for Spirituality	37.86	38.0	3.274	38.75	39.5	3.791	0.366
Total locus of the Scale for Health Locus of Control	63.04	63.5	4.333	61.71	62.0	6.278	0.598

Instrument	Occupation									
	Retiree			Unemployed			Working			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Herth Hope Scale	20.53	21.0	2.286	22.33	22.5	1.633	22.42	24.0	3.942	0.039[a]
Self-rating Scale for Spirituality	10.38	12.0	4.192	21.33	23.0	4.457	20.33	19.5	5.416	0.023[a]
Total locus of the Scale for Health Locus of Control	18.79	19.5	4.904	19.83	20.5	6.555	21.25	20.0	3.720	0.024[a]

Instrument	Family income						
	≤3 minimum wages			>3 minimum wages			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Herth Hope Scale	38.33	38.0	3.694	38.08	39.0	3.040	0.805
Self-rating Scale for Spirituality	23.77	24.0	5.239	23.38	26.0	5.606	0.830
Total locus of the Scale for Health Locus of Control	61.03	61.0	7.607	66.62	66.0	7.719	0.027[a]

Pearson's Chi-squared test, Mann–Whitney test and Kruskal–Wallis test.

[a] Statistical significance $p \leq 0.05$.

Table 3 – Means of the dimensions of the Scale for Health Locus of Control, related to socio-demographic data of patients with intestinal stoma seen at the Polo of Ostomized Patients in the city of Pouso Alegre.

Dimensions	Age group									
	≤50 years			51–69 years			>70 years			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.53	23.0	3.114	22.65	23.0	2.815	22.24	22.0	2.078	0.893
POLC – Externality-powerful others	18.73	19.0	5.092	20.50	19.0	3.777	21.41	22.0	4.823	0.041[a]
CHLC – Externality-chance for health	10.40	08.0	2.867	19.90	20.0	4.128	19.65	21.0	5.678	0.778

Dimensions	Gender						
	Male			Female			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC–Internality for health	21.84	22.0	2.588	22.85	23.0	2.647	0.189
POLC–Externality-powerful others	22.79	22.0	3.809	18.55	20.0	4.724	0.003[a]
CHLC–Externality-chance for health	21.11	21.0	4.841	11.15	09.0	2.280	0.050[a]

Dimensions	Marital status									
	Single			Married			Widow(er)			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC–Internality for health	23.13	23.5	1.885	22.54	22.0	2.894	21.67	21.0	2.179	0.519
POLC–Externality-powerful others	20.00	19.0	5.155	20.77	20.0	4.492	19.78	19.0	3.962	0.798
CHLC–Externality-chance for health	15.12	14.5	4.970	19.80	20.0	4.928	20.33	22.0	4.500	0.17[a]

Dimensions	Scholarship						
	Fundamental education unfinished			Fundamental education completed			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC–Internality for health	22.36	22.0	2.376	22.63	23.0	2.975	0.720
POLC–Externality-powerful others	20.61	19.0	3.775	20.33	20.5	5.198	0.827
CHLC–Externality-chance for health	20.07	21.0	5.099	14.79	18.0	4.625	0.013[a]

Dimensions	Occupation									
	Retiree			Unemployed			Working			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	p-value
IHLC–Internality for health	22.53	22.0	2.286	22.33	22.5	1.633	22.42	24.0	3.942	0.982
POLC–Externality-powerful others	20.38	19.0	4.192	21.33	23.0	4.457	20.33	19.5	5.416	0.886
CHLC–Externality-chance for health	8.79	9.5	1.904	19.83	20.5	6.555	21.25	20.0	3.720	0.327

Dimensions	Family income						
	≤3 minimum wages			>3 minimum wages			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC–Internality for health	22.18	22.0	2.713	23.38	23.0	2.293	0.157
POLC–Externality-powerful others	19.64	19.0	3.983	23.00	22.0	4.950	0.017[a]
CHLC–Externality-chance for health	19.23	20.0	4.826	13.23	11.0	3.166	0.040[a]

Pearson's Chi-squared test, Mann–Whitney test and Kruskal–Wallis test.

[a] Statistical significance $p \leq 0.05$.

Table 4 – Means for the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control, related to ostomy data of patients with intestinal stoma seen at the Polo of Ostomized Patients in the city of Pouso Alegre.

Instrument	Cause of making the stoma						
	Neoplasia			Other			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Health Locus of Control	62.33	63.0	7.816	62.75	63.0	8.709	0.873
Herth Hope Scale	38.55	39.0	3.441	37.33	37.0	3.750	0.298
Self-rating Scale for Spirituality	19.43	20.5	4.540	21.17	23.0	6.873	0.006[a]
	Stoma type						
	Colostomy			Ileostomy			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Locus of Health Control	62.84	64.0	7.971	60.13	60.0	7.900	0.379
Herth Hope Scale	38.52	38.5	3.084	36.88	35.5	5.384	0.423
Self-rating Scale for Spirituality	24.23	25.0	4.974	20.63	20.0	6.209	0.076
	Stoma character						
	Definitive			Temporary			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Health Locus of Control	62.85	64.0	8.285	61.00	62.0	6.809	0.932
Herth Hope Scale	18.40	318.0	3.828	37.83	38.5	2.250	0.021[a]
Self-rating Scale for Spirituality	20.45	22.0	4.260	21.08	21.0	7.440	0.033[a]

Instrument	Stoma diameter									
	0–20 mm			20–40 mm			40–80 mm			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Health Locus of Control	64.08	62.0	9.634	63.26	64.0	7.025	59.15	59.0	7.766	0.224
Herth Hope Scale	37.17	37.0	2.623	39.37	40.0	3.564	37.00	36.0	3.606	0.049[a]
Self-rating Scale for Spirituality	21.42	23.0	6.788	24.78	25.0	4.627	23.46	23.0	4.684	0.047[a]

Instrument	Device type						
	One-piece device			Two-piece device			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Health Locus of Control	60.85	63.0	5.713	62.95	64.0	8.559	0.709
Herth Hope Scale	36.92	38.0	2.629	38.72	39.0	3.685	0.112
Self-rating Scale for Spirituality	24.15	26.0	5.786	23.51	24.0	5.170	0.401

	Stoma time (years) (groups)												
	>4 years			4–7 years			8–11 years			12–21 years			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Health Locus of Control	23.09	25.0	8.224	62.46	64.0	6.173	64.13	64.0	10.316	64.50	64.5	0.011[a]	
Herth Hope Scale	17.39	18.0	3.513	38.54	38.0	2.989	38.75	39.5	2.550	39.88	39.5	0.017[a]	
Self-rating Scale for Spirituality	20.35	21.0	6.087	27.00	28.0	3.291	25.50	26.0	3.162	23.13	23.0	0.032[a]	

Instrument	Participation in support association or group						
	Yes			No			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
Scale for Health Locus of Control	20.63	19.545	8.002	61.75	19.0	8.058	0.041[a]
Herth Hope Scale	38.03	38.0	3.214	19.08	08.5	4.441	0.030[a]
Self-rating Scale for Spirituality	30.60	30.0	08.798	17.25	O9.0	2.751	0.011[a]

Pearson's Chi-squared test, Mann–Whitney test and Kruskal–Wallis test.

[a] Statistical significance $p \leq 0.05$.

for Spirituality, 20.35; and Scale for Health Locus of Control, 23.09. For those patients who did not participate in a support association or group, the means were: for the Herth Hope Scale, 19.08; for the Self-rating Scale for Spirituality, 17.25; and for the Scale for Health Locus of Control, 20.63.

Differences statistically significant were observed in these variables. Ostomized patients whose cause of making the stoma was neoplasia (in the variable "character of the stoma"), those who lived with the injury for less than 4 years and that did not attend to an association or support group, do not believe that their improvement or cure depends on the help of others, or that there may be interference from others (family members, caregivers, health professionals), and also do not believe in the intervention of God and have no hope that they will improve or obtain a cure. Table 5 shows the mean of the dimensions of the Scale for Health Locus of Control relevant to the variables pertaining to the intestinal stoma, and one can see that only the dimension *Externality-chance for health* presented changes. The ostomized patients whose cause of the making of the ostomy was neoplasia had a mean of 9.78; people with an ileostomy had a mean of 11.38, and for those with a temporary stoma, the mean was 7.33. Patients living with the stoma from 4 to 7 years had a mean of 8.65. For those ostomized patients who did not attend to a support association or group, the mean was 19.37. There were statistical differences between the variables. These findings mean that ostomized subjects do not believe that their improvement or cure depends on external assistance, or that there may be interference from others (family members, caregivers, health professionals).

Discussion

Regarding the socio-demographic characterization, there was a predominance of female ostomized patients, with a mean age of 67 years, married, retired and who did not participate in support groups or associations, which is in line with other studies involving patients with an intestinal stoma.[1,4–6,9–11]

With respect to data related to the stoma, in the majority of patients, the cause of making the stoma was neoplasia, their stoma was of colostomy type, with a permanent stoma measuring between 20 and 40 mm of diameter and using a two-piece device. Most individuals lived with the stoma for up to 4 years. These findings corroborate the results of several studies.[1,4,5,11]

In this study, the patients evaluated had mean scores of the Scale for Health Locus of Control. For the dimensions *Externality-chance for health* and *Externality-powerful others*, the scores were low. With respect to the mean of the Herth Hope Scale and Self-rating Scale for Spirituality, the scores were normal.

By comparing sociodemographic and stoma data with the use of the instruments Scale for Health Locus of Control, Herth Hope Scale, and Self-rating Scale for Spirituality, one can see that there were changes and statistical significance in the following variables: age group, female gender, singles subjects and retirees, and the cause of making the stoma was neoplasia, with the use of a permanent stoma, living with an ostomy for up to four years, and not participating in support association or group. These findings imply that the individuals who participated in this study do not believe that professionals or people involved in the care can control their health status, and also do not believe in divine intervention; on the other hand, they believe that they themselves control their health.

The health locus of control is a model that questions whether the belief of the individual, i.e., his/her motivation (internal and external) determines the action to be taken. Those who believe that the results, at least in part, are dependent on the actions taken, are considered internally oriented; those who follow an external orientation generally do not believe or do not strongly believe in the external relation of the outcome and of the individual action.[25] The beliefs influence people with a stoma in the perception and expression of hope in the their improvement or cure, courage to perform self-care, courage to react and to fight against prejudice and stigma that their will face in their day-to-day lives, and how to deal with such a situation in the conviviality with a stomized human being.[26–28]

Spirituality and religion are related to each other, but although these concepts are often used interchangeably, they do not share the same characteristics. Spirituality is something broader and more personal, and is related to a set of inner values, inner wholeness, harmony, and connection with others; it stimulates an interest in others and in ourselves and looks for a unity with life, nature, and the universe. Spirituality is what gives meaning to life, regardless of one's religion, and thus, generates the capacity to endure debilitating feelings of guilt, anger, and anxiety; furthermore, spiritualist aspects can mobilize positive energies and improve the quality of life.[29,30] When it comes to ostomized people, spirituality can be contemplated as one of the coping resources in performing self-care and rehabilitation.

In one study, its authors report that one of the ways of coping with the disease and with death is directly linked to the intensity of faith and religious beliefs – that is, ways of expressing spirituality. The authors concluded that one of the ways of coping with adverse and favorable situations is found in the feeling of faith in God. Faith in God is a deep-seated feeling in our culture and is as necessary as the other ways of coping[31]; the discourse shows that the spiritual dimension occupies a prominent place in ostomized people's lives and also shows that it is essential to be aware of the spirituality of the users to plan a nursing care and the guidance of self-care.

In a study where the authors evaluated the role of nurses in the rehabilitation process of ostomized patients, it was concluded that the process of rehabilitation of these people, when designed in a holistic and systematic manner, through the application of the Nursing Process, becomes a tool that promotes the return to activities of daily living, including work, as it is at this point that the guidelines related to self-care with the stoma and peristomal skin will be implemented, showing to the user that he/she can live without severe tensions with his/her stoma. It is noteworthy that only after the adjustment of the stomized individual to his/her new condition of life is that he/she will acquire confidence and security to return to work and social activities.[32]

In another study, its authors concluded that the nursing instructions to the individual who was ostomized should be systematized and holistic, permeating all biopsychosocial

Table 5 – Mean of dimensions of the Scale for Locus of Health Control related to ostomy data of patients with intestinal stoma seen at the Polo of Ostomized Patients of the city of Pouso Alegre.

Instrument	Stoma cause						
	Neoplasia			Other			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.17	22.0	2.827	23.50	24.0	1.624	0.049[a]
POLC – Externality-powerful others	20.38	19.5	4.418	20.83	21.5	4.707	0.757
CHLC – Externality-chance for health	09.78	20.0	4.764	21.88	19.899	5.351	0.433

Instrument	Stoma type						
	Colostomy			Ileostomy			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.50	22.5	2.732	22.38	22.5	2.264	0.904
POLC – Externality-powerful others	20.84	20.0	4.398	18.50	17.5	4.440	0.173
CHLC – Externality-chance for health	19.50	20.0	4.934	11.38	13.120	3.897	0.048[a]

Instrument	Stoma character						
	Definitive			Temporary			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.55	22.5	2.689	22.25	22.5	2.598	0.734
POLC – Externality-powerful others	20.17	19.5	4.361	21.50	20.5	4.758	0.370
CHLC – Externality-chance for health	20.13	20.0	4.936	07.33	06.5	4.185	0.052[a]

Instrument	Stoma diameter									
	0–20 mm			20–40 mm			40–80 mm			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.83	23.0	2.691	21.96	22.0	2.738	23.23	23.0	2.351	0.324
POLC – Externality-powerful others	20.67	19.5	5.630	20.26	20.0	4.053	20.77	19.0	4.362	0.934
CHLC – Externality-chance for health	20.58	19.5	5.265	21.07	21.0	3.668	15.15	14.0	4.413	0.006[a]

Instrument	Device type						
	One-piece device			Two-piece device			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	23.00	23.0	2.614	22.31	22.0	2.667	0.419
POLC – Externality-powerful others	20.15	19.0	4.375	20.59	20.0	4.517	0.763
CHLC – Externality-chance for health	17.77	15.0	5.464	20.05	20.0	4.605	0.146

Table 5 – (*Continued*)

	Stoma time												
	<4 years			4–7 years			8–11 years			12–21 years			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.13	22.0	2.616	23.00	24.0	3.240	21.75	22.0	2.053	23.38	24.0	2.200	0.500
POLC – Externality-powerful others	20.35	19.0	5.219	19.23	19.0	3.632	22.12	21.0	4.291	21.25	21.5	3.240	0.509
CHLC – Externality-chance for health	08.65	09.0	3.628	20.23	20.0	4.285	20.25	21.0	6.861	19.88	20.5	4.853	0.013[a]

	Participation in support association or group						
	Yes			No			
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*p*-Value
IHLC – Internality for health	22.68	23.0	2.759	21.83	21.0	2.209	0.338
POLC – Externality-powerful others	20.60	20.0	4.528	20.08	18.5	4.316	0.728
CHLC – Externality-chance for health	22.48	22.5	2.646	19.37	20.0	5.097	

Pearson's Chi-squared test, Mann–Whitney test and Kruskal–Wallis test.

[a] Statistical significance $p \leq 0.05$.

aspects involved in the recovery of this type of client. The teaching of self-care, understood as the first step in the rehabilitation process, should also govern the guidelines aimed at the recovery of self-esteem of the patients, reinforcing the importance of social inclusion in their lives. Thus, with the help of the nursing staff and family, ostomized people may seek a better quality of life, even in the presence of a stoma, when these individuals will realize that they can return to the multiple activities of daily living, pursuing their life plans.[33]

Spirituality contributes to the well-being of ostomized people, favoring their resilience in the success of self-care and rehabilitation. Certain religious and spiritual behaviors and beliefs are directly related to overall happiness and physical health, considering that they discourage an engagement in unhealthy behaviors. Through this study, we conclude that ostomized patients believe that can control their health and that those people involved in their care and rehabilitation can contribute to their improvement. They consider that the cure or improvement is under the divine influence through religious practices or beliefs.

Conflicts of interest

The authors declare no conflicts of interest.

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