

# SOCIODEMOGRAPHIC AND CLINICAL FACTORS RELATED TO THE QUALITY OF LIFE IN INTESTINAL OSTOMY PATIENTS

## FATORES SOCIODEMOGRÁFICOS E CLÍNICOS RELACIONADOS À QUALIDADE DE VIDA EM PACIENTES ESTOMIZADOS INTESTINAIS

## FACTORES SOCIODEMOGRÁFICOS Y CLÍNICOS RELACIONADOS CON LA CALIDAD DE VIDA EN PACIENTES CON ESTOMA INTESTINAL

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**Objective:** to assess the association between sociodemographic and clinical factors and quality of life of intestinal ostomy patients. **Method:** cross-sectional and analytical study, carried out with 73 patients with intestinal stoma, who answered a sociodemographic and clinical form and the City of Hope Quality of Life Colostomy Patients in February 2016. The linear regression with backward method and significance level of 5% were used on the Statistical Package for Social Science. **Results:** age and religion increased the overall quality of life. Religion, unemployment, non-smoker, receiving outpatient follow-up and the number of income contributors led to greater physical well-being. Lower age and greater time after surgery resulted in greater psychological well-being. Lower age and female sex were associated with less social well-being. Unemployment resulted in lower spiritual well-being. **Conclusion:** the clinical and sociodemographic factors contributed to changing the quality of life of intestinal ostomy patients.

**Descriptors:** Ostomy. Quality of Life. Cross-Sectional Studies.

*Objetivo:* verificar a associação dos fatores sociodemográficos e clínicos na qualidade de vida de pacientes estomizados intestinais. *Método:* estudo transversal e analítico, realizado com 73 pacientes estomizados intestinais, que responderam um formulário sociodemográfico e clínico e o City of Hope Quality of Life Colostomy Patients, em fevereiro de 2016. *Utilizou-se a regressão linear com método backward e significância de 5% no Statistical Package for Social Science. Resultados:* idade e prática de religião aumentaram a qualidade de vida geral. Praticar a religião, estar desempregado, não ser tabagista, receber acompanhamento ambulatorial e o número de contribuintes da renda levaram ao maior bem-estar físico. Menor idade e maior tempo após a cirurgia implicaram maior bem-estar psicológico. Menor idade e sexo feminino associaram-se ao menor bem-estar social. *Estar desempregado resultou*

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*em menor bem-estar espiritual. Conclusão: os fatores sociodemográficos e clínicos contribuíram para alteração da qualidade de vida dos pacientes estomizados intestinais.*

*Descritores: Estomia. Qualidade de Vida. Estudos Transversais.*

*Objetivo: evaluar la asociación de factores sociodemográficos y clínicos sobre la calidad de vida de los pacientes con estoma intestinal. Método: estudio transversal y analítico, realizado con 73 pacientes con estoma intestinal, que respondieron a un formulario sociodemográfico y clínico de la City of Hope Quality of Life Colostomy Patients en febrero de 2016. Se utilizó la regresión lineal con el método backward y el nivel de significancia del 5% en el Statistical Package for Social Science. Resultados: la edad y la práctica de la religión aumentaron la calidad de vida en general. La práctica de la religión, estar desempleado, no ser un fumador, recibir el seguimiento ambulatorio y el número de contribuyentes de renta llevaron a un mayor bienestar físico. Menor edad y mayor tiempo después de la cirugía se tradujeron en un mayor bienestar psicológico. Menor edad y el sexo femenino se asociaron con menor bienestar social. Estar desempleado resultó en menor bienestar espiritual. Conclusión: los factores sociodemográficos y clínicos contribuyeron a la alteración de la calidad de vida de los pacientes con estoma intestinal.*

*Descritores: Estomía. Calidad de Vida. Estudios Transversales.*

## Introduction

Chronic diseases are currently the leading causes of death worldwide, and the increase of their occurrence is related to the intensification of environmental, social and negative life style factors. These diseases, including cancer, are usually associated with cognitive disorders (attention and memory) and physical conditions that reduce the interaction and social inclusion of the affected individuals<sup>(1)</sup>. In Brazil, between 2018 and 2019, it is expected 600 thousand new cases of cancer each year. With the exception of non-melanoma skin cancer, there will be 420 thousand new cases of cancer. Globally, the estimates are 640 thousand new cases. These estimates include prostate, lung, female breast and colon and rectum cancers among the most incidents<sup>(2)</sup>.

Cancer is a disease that involves various social stigmas, in addition to often being associated with death, suffering and pain, despite the remarkable recent technological and therapeutic advances. In this way, receiving the diagnosis of such disease and performing the proposed treatment, in addition to its adverse effects and risks involved, make the patients change their lives in social, conjugal and family aspects<sup>(3)</sup>.

Some of the existing treatments include chemotherapy, radiotherapy, hormone therapy and surgery. This last is configured as an advantageous method, because it offers healing

ability for a remarkable number of cases; no carcinogenic effect; no risk of biological resistance; and allows for a more appropriate staging of the tumor. However, when the cancer develops in the colon and rectum, an intestinal stoma is often necessary as part of the surgical treatment, in order to enable the patient survival<sup>(3-4)</sup>. Thus, the ostomy, a surgically created opening in the abdominal wall to facilitate the elimination of feces, is necessary as an emergency or even palliative therapeutic method<sup>(5-6)</sup>.

In this context, the creation of a stoma in surgical environment alters the physical integrity of the patient, an important element to his/her individual well-being and social interaction. Facing a pathological condition, the presence of the ostomy and body changes brought with it commonly lead to physical, psychological, spiritual and social problems<sup>(7)</sup>, including: sexual problems, depressive feelings, constipation, dissatisfaction with the appearance, change in clothing, low self-esteem, bad smell, difficulty to travel, feeling of tiredness and concern with the sounds produced<sup>(8-9)</sup>. Therefore, the intestinal ostomy patient requires the maintenance of specialized care, in order to promote independence for the self-care, adherence to treatment and the best possible quality of life (QOL)<sup>(7)</sup>.

The World Health Organization defines QOL as “[...] an individual’s perception of their

position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns<sup>(10:1405)</sup>. Thus, it is a subjective concept, which refers to the personal satisfaction related to several aspects, especially those considered essential to a person's life. A systematic literature review carried out in 2015 identified that living with ostomy (whether related to cancer or not) negatively affects the quality of life of patients<sup>(8)</sup>. The factors related to the decreased quality of life by the presence of the ostomy include physical changes that affect social interaction and produce negative feelings (low self-esteem, anxiety, depression and social isolation) arising from the altered appearance and complications with the stoma<sup>(8-9)</sup>.

Despite the knowledge that living with intestinal ostomy, especially when associated with cancer diagnosis, produces changes that can lead to reduced quality of life, little is known about the sociodemographic and clinical elements that can contribute to this outcome. For example, a research carried out with 60 intestinal ostomy patients (after diagnosis of colorectal cancer) in the state of São Paulo stands out. This survey identified that the sociodemographic and clinical factors - female sex, low income, not having sexual partners and lack of guidance - showed statistically significant differences with the general quality of life<sup>(11)</sup>. Nevertheless, certain variables were not analyzed in association with the QOL, such as religion, education, work situation, the cause of intestinal ostomy, length of the ostomy, character of the ostomy, use of irrigation and comorbidities. Subsequently, further studies were not identified with the analysis described in the intestinal ostomy population. The verification of this relationship is important to identify factors that can be prevented, controlled or modified through new health strategies, by the construction and/or improvement of health programs and public policies and social programs focused on these patients.

On this basis, the objective of this study was to investigate the association of sociodemographic

and clinical factors with the quality of life of intestinal ostomy patients.

## Method

This was a cross-sectional and quantitative study among the patients registered in the program of ostomy outpatient care of the Health Department of Distrito Federal, Brazil. There was inclusion of men and women aged over 18 years, with colostomy and submitted to the confection of intestinal ostomy for over 12 months. Excluded participants: children, adolescents, pregnant women, nursing mothers, bedridden and with physical or mental disabilities.

The non-intentional probabilistic sampling was used, so that the sample size was determined taking into account the spatial limitation of the health service facilities (100 individuals per session) and the number of patients treated in the collection period. Thus, 80 patients were initially included, with the exclusion of seven due to abandonment of the study, resulting in a final sample of 73 intestinal ostomy patients.

Data collection occurred in February 2016 through a sociodemographic and clinical questionnaire, an anthropometric data form and the City of Hope - Quality of Life - Ostomy Questionnaire (OHC-QOL-OQ). The instruments were applied collectively, before the care sessions in the health service, to those who agreed to participate in the study by signing two copies of the Informed Consent Form (ICF), after receiving information on the proposed goals and procedures, with a copy for the participant and another for the researcher.

The sociodemographic and clinical questionnaire, created by the authors, involved the following sociodemographic variables: sex, age, marital status, family, religion, religious practice, education, work situation, family income; and the following clinical data: cause of intestinal ostomy, length of ostomy, character of the ostomy, use of irrigation and comorbidities. This analysis also included issues relating to the follow-up in the service and reception of collecting devices.

The OHC-QOL-OQ was developed by upgrading and expanding, in the 1980's, the City of

Hope - Quality of Life - Colostomy Patients<sup>(12-13)</sup>. The OHC-QOL-OQ aims to evaluate the QOL of ostomy patients and is composed of 43 items organized in four domains: Physical Well-Being-PWB (items 1 through 11), Psychological Well-Being-PWB (items 12 through 24), Social Well-Being-SWB (items 26 through 36), and Spiritual Well-being-SWB (items 37 through 43). The responses were evaluated on the 10-point Likert scale, in which 0 (zero) is equivalent to a bad QOL and 10 (ten) is considered an excellent QOL<sup>(12-14)</sup>. For the analysis, the scores given by respondents for each domain item were summed and divided by the number of items in the own domain. The total score was obtained by the arithmetic average of the 43 questions contained in the instrument (sum of all items of the instrument divided by 43). Values greater than or equal to the average were considered as high quality of life and lower values, as low quality of life. Furthermore, the items 1 through 12, 15, 18 and 19, 22 through 30, 32 through 34 and 37 present inverse scale, that is, the score given by respondents on the Likert scale must be reversed before analysis<sup>(12-14)</sup>.

For data organization and analysis, a database was created on Excel program (Office 2010) and the Package Statistical Package for Social Sciences (version 20.0) was used. The analysis used the simple linear regression with backward method for the selection of variables, the adjusted  $R^2$  as an indicator of adjustment of the model, and the ANOVA (F test) as a significance indicator. The partial correlation and the p-value were used as criteria for exclusion of variables in the tested models. In each model, the variables with the lowest partial correlation were excluded until obtaining the final model. The effect of each predictor on the stress level

outcome was evaluated through Beta values, adopting statistical significance level of 5%. The assumptions of linearity of relations and the normality of errors were calculated to define the final model. The waste (difference between observed and expected value) were evaluated in each model through the variance inflation factor (VIF). The Cronbach's alpha coefficient was applied to analyze the reliability of the applied instruments<sup>(15)</sup>.

The research was approved on 13 October 2015 by the Research Ethics Committee of the Health Sciences School of the University of Brasília (CEP/FS/UnB), under the Certificate of Submission for Ethical Evaluation (CAAE) n. 46323815.2.0000.0030 and by the Research Ethics Committee of the Health Sciences Teaching and Research Foundation of the Health Department of Distrito Federal (CEP/FEPECS/SES), under CAAE n. 46323815.2.3001.5553.

## Results

Of the 180 patients initially predicted, 39 did not meet at least one of the eligibility criteria, 61 did not agree to participate in the study, 1 patient died, 2 moved away to another state and 4 withdrew for personal reasons. Thus, 73 patients comprised the final sample of this study.

The reliability analysis of the instruments resulted in alphas of 0.86 for the 43 items of the OHC-QOL-OQ. Moreover, the alphas for the domains Physical Well-Being, Psychological Well-Being, Social Well-Being and Spiritual Well-Being were 0.88, 0.72, 0.81 and 0.73, respectively. These values attest satisfactory reliability to the instruments used in this study<sup>(15)</sup>. Table 1 presents the sociodemographic characteristics of intestinal ostomy patients.

**Table 1** – Sociodemographic characteristics of the intestinal ostomy patients. Brasília, Distrito Federal, Brazil – 2016 (N=73) (continued)

Variable	n	%	Mean	Standard Deviation
<b>Sex</b>				
Male	29	39.7		
Female	44	60.3		
<b>Marital Status</b>				
Married	37	50.7		

**Table 1** – Sociodemographic characteristics of the intestinal ostomy patients. Brasília, Distrito Federal, Brazil – 2016 (N=73) (conclusion)

Variable	n	%	Mean	Standard Deviation
Unmarried	12	16.4		
Stable Union	13	17.8		
Divorced	5	6.8		
Widow(er)	6	8.2		
<b>Religion*</b>				
Catholic	45	61.6		
Evangelical	21	28.8		
Spiritism	3	4.1		
Others	2	2.8		
<b>Religion Practitioner*</b>				
Yes	46	63.0		
No	18	24.7		
<b>Education*</b>				
Primary Education	49	67.1		
Secondary Education	17	23.3		
Higher Education	1	1.4		
None	6	8.2		
<b>Work Situation*</b>				
Leave	23	31.5		
Retired	35	47.9		
Unemployed	12	16.4		
Employed	3	4.1		
<b>Monthly Income*</b>				
< 1 Minimum Wage	7	9.6		
Between 1 and 3 Minimum Wages	54	74.0		
> 3 Minimum Wages	11	15.1		
<b>Age (years)</b>			55.22	13.2

Source: Created by the authors.

\* Some participants did not respond this item.

Table 1 shows the predominance of female intestinal ostomy patients (60.3%), married (50.7%), with mean age of 55.2 years ( $\pm 13.2$ ), of catholic religion (61.6%), religion practitioners (63.0%), whose educational attainment was

primary education (67.1%). Away from work (31.5%) and receiving between 1 and 3 minimum wages (74%). Table 2 shows the clinical characteristics of the intestinal ostomy patients.

**Table 2** – Clinical characterization of the intestinal ostomy patients. Brasília, Distrito Federal, Brazil – 2016 (N=73) (continued)

Variables	n	%
<b>Type of Stoma*</b>		
Definitive	32	43.8
Temporary	33	45.2
<b>Use of irrigation system*</b>		
Yes	1	1.4
No	71	97.3
<b>Smoking*</b>		
Yes	25	34.2
No	47	64.4

**Table 2** – Clinical characterization of the intestinal ostomy patients. Brasília, Distrito Federal, Brazil – 2016 (N=73) (conclusion)

Variables	n	%
<b>Outpatient follow-up*</b>		
Yes	57	78.1
No	14	19.2
<b>Reception of collecting devices</b>		
Yes	71	97.3
No	2	2.7
<b>Cause of Colostomy</b>		
Colorectal cancer	41	56.2
Inflammatory Bowel Disease	11	12.3
Abdomen-perineal Trauma	9	15.1
Diverticular Disease	8	11.0
Chagas Disease	4	5.5

Source: Created by the authors.

\* Some participants did not respond this item.

Table 2 show the predominance of patients with temporary ostomy (45.2%), who did not use irrigation system (97.3%), non-smokers (64.4%), who underwent outpatient follow-up (78.1%). In addition, the patients received the

necessary collecting devices (97.3%) and had colorectal cancer (56.2%) as the main cause of colostomy. Table 3 describes the levels of overall quality of life and by domain of the OHC-QOL-OQ.

**Table 3** – Levels of overall quality of life and by domain of the COH-QOL-OQ. Brasília, Distrito Federal, Brazil – 2016 (N=73)

Quality of Life	Classification of the Quality of Life	
	Low n(%)	High n(%)
Overall (43 items)	45 (61.6%)	28 (38.4%)
Physical Well-Being	46 (63.0%)	27 (37.0%)
Psychological Well-Being	42 (57.5%)	31 (42.5%)
Social Well-Being	42 (57.5%)	31 (42.5%)
Spiritual Well-Being	28 (38.4%)	45 (61.6%)

Source: Created by the authors.

Table 3 shows the predominance of intestinal ostomy patients with low overall quality of life (61.6%). In the analysis by domain, the quality of life was low in the physical (63%), psychological (57.5%) and

social (57.5%) domains. The sociodemographic and occupational variables with  $p < 0.20$  were included in the multiple linear regression analysis, whose findings for the final model are presented in Table 4.

**Table 4** – Final linear regression model of sociodemographic and clinical characteristics on overall quality of life and by domains in intestinal ostomy patients. Brasília, Distrito Federal, Brazil – 2016 (N = 73) (continued)

Predicting variables	Outcomes			
	Overall Quality of Life			
	$\beta$	P-value	Adjusted R <sup>2</sup>	ANOVA (F Test)*
(Constant)**	5.909	0.798		
Age	-0.025	0.011	0.138	0.013*
Religion Practitioner (Yes)	0.001	0.025		

**Table 4** – Final linear regression model of sociodemographic and clinical characteristics on overall quality of life and by domains in intestinal ostomy patients. Brasília, Distrito Federal, Brazil – 2016 (N = 73) (conclusion)

Predicting variables	Outcomes			
	Overall Quality of Life			
	$\beta$	P-value	Adjusted R <sup>2</sup>	ANOVA (F Test)*
<b>Physical Well-Being</b>				
(Constant)	0.271	0.886	0.319	<0.001*
Religion Practitioner (Yes)	1.990	<0.001		
Work Situation (Employed)	0.731	0.038		
Number of income contributors	0.482	0.026		
Smoking (No)	1.031	0.048		
Outpatient Follow-up (Yes)	2.801	0.003		
<b>Psychological Well-Being</b>				
(Constant)	6.578	<0.01	0.08	0.046*
Age	-0.027	0.027		
Time since the Surgery (Months)	0.081	0.081		
<b>Social Well-Being</b>				
(Constant)	7.307	<0.001	0.246	<0.001*
Age	-0.70	<0.001		
Sex (Female)	1.082	0.019		
<b>Spiritual Well-Being</b>				
(Constant)	6.197	0.001	0.178	0.003*
Work Situation (Unemployed)	-1.077	0.001		
Reception of collecting devices (Yes)	3.303	0.057		

Source: Created by the authors.

\* p<0.05 - Statistically significant model.

\*\* Constant variable: use of irrigation system.

Table 4 shows that the increase of age and being a religion practitioner contribute to increasing the overall quality of life of the ostomy patients. These predictors explain 13% of this outcome in a statistically significant model.

Being religion practitioner, employed, non-smoker, receiving outpatient follow-up in the health service, as well as higher number of contributors to the income are factors that contribute to greater physical well-being. Together, these elements explain 31% of the field Physical Well-Being of quality of life.

In the analysis of the Psychological Well-Being, age and time since the surgery are predictors that contribute to the quality of life in that domain. Thus, the higher the age of ostomy patients, the lower their psychological well-being. On the other hand, the greater the time

since the surgery, the greater psychological well-being of these patients.

The age and sex explain 24% of the quality of life in the social domain, so that patients with higher age have a lower quality of life in the Social Well-Being domain (inverse relationship), whereas females have a higher quality of life in that domain. Moreover, the work situation explains 17% of the quality of life in its spiritual component. Being unemployed results in reduced spiritual well-being of the evaluated patients.

## Discussion

In Brazil, the estimates for the period from 2018 to 2019 are 17,380 new cases of cancer of colon and rectum in men and 18,980 in women

each year. It is the third most common type of cancer in men and the second among women<sup>(1)</sup>. In this sense, it is important to understand the social, economic and clinical context of those patients, since these aspects affect differently the routine of patients and their adherence to treatment and care, with potential impact on their quality of life.

In this study, there was a predominance of women, married, with mean age of 55 years, practitioners of the Catholic religion, with mean income of 1 through 3 minimum wages and primary education, whose main cause of ostomy was colorectal cancer. A research with 60 intestinal ostomy patients in the state of São Paulo also found a predominance of females (51.7%), aged over 61 years (60%), who lived with a partner (55%), with family income between 1 and 3 minimum wages (78.3%) and complete primary education (61.7%)<sup>(16)</sup>.

A research carried out by the Regional Center for Ostomy Patients in Western Paraná with 195 medical records of ostomy patients identified a predominance of females (53%), aged over 60 years (43%) and with a diagnosis of cancer of the colon and rectum (78%) as the cause of the ostomy<sup>(17)</sup>. In short, in all of the aforementioned studies, the patients are female, with stable marital relationship, limited educational attainment and relatively low monthly income, being the ostomy secondary to neoplasms of the colon and rectum. The prevalence of this type of cancer in women corroborate the estimate made by the National Cancer Institute, which stated that, in the period from 2018 to 2019, there would be 18,980 new cases of cancer of the colon and rectum expected in women each year, i.e., 1,500 cases more than in men<sup>(1)</sup>.

Being married may be a protective factor in the treatment of cancer and adherence to self-care with the ostomy, since both processes involve doubts, fear and difficulties that can be minimized with the support brought by the partner. A research carried out with 60 ostomy patients from Botucatu (São Paulo) found that 100% of the sample pointed the family as the main source of aid received during the care with the ostomy<sup>(16)</sup>. An integrative review of

38 articles verified that the psychosocial and family support could improve the overall quality of life of those patients<sup>(18)</sup>. On the other hand, the low educational attainment, which can affect the understanding and implementation of necessary care at home; the economic limitations that hinder the acquisition of goods and resources required for the care; access to health services for clinical follow-up; and personal and social changes related to cancer diagnosis can lead to a drop in the quality of life<sup>(9,19)</sup>. This was verified in a study conducted in Romania with 56 patients with colorectal cancer, which concluded that ostomy negatively affected the overall quality of life, being influenced by the etiology of the stoma, the location of the stoma and depression caused by the disease and the presence of the stoma<sup>(19)</sup>.

There was a predominance of intestinal ostomy patients with low overall quality of life (61.6%). Quality of life was low in the physical (63%), psychological (57.5%) and social (57.5%) domains, being high in Spiritual Well-Being (61.6%) domain. A research conducted with 57 intestinal ostomy patients in Turkey, through the Stoma Quality of Life Scale, identified low quality of life related to the stoma (Mean: 45.10; Standard deviation 18.88)<sup>(9)</sup>. In this sense, it highlighted that, after placing the stoma, in addition to all the physical and emotional overload lived when this is secondary to cancer diagnosis, the patient faces daily challenges, such as unawareness of the ostomy, difficulties to deal with the presence of the collecting bag, the barriers to social reintegration and changes in body image and sexual activity that may occur<sup>(6,20)</sup>. Such aspects, depending on the family support and health care received by the patient, may jeopardize his/her overall quality of life and its related domains<sup>(4,6)</sup>.

In relation to the Spiritual Well-Being domain, the findings in this study may be justified by the practice of religion, which was frequent in the study population and is pointed out in the literature as a health protective factor that assists in social reintegration, coping processes of adversity and, consequently, the maintenance of the quality of life, especially in situations of emotional vulnerability and overload<sup>(6,21)</sup>.



In this study, there was a predominance of low quality of life (61.6%) in ostomy patients. Nonetheless, a study conducted in the Federal District with elderly intestinal ostomy patients receiving outpatient care from nurses identified a high quality of life in those patients<sup>(11)</sup>. In this context, the performance of the nurse or health professional specialized in pre- and post-operative ostomy becomes important to guide the patient to maintain a good quality of life. These professionals are directly involved in the stoma therapy, an activity specific of nurses and, therefore, based on scientific knowledge. However, a study conducted with 60 intestinal ostomy patients in Southeastern Brazil revealed that 96.7% received post-operative guidance on the stoma, but 65% reported having “a lot of” difficulty in self-care with the stoma and 61.7%, with the collecting bag<sup>(16)</sup>. In this sense, it is important to being the actions directed to the self-care with the ostomy preoperatively and continue them until the individual’s rehabilitation, in order to allow for the daily care and his/her reintegration into the social context<sup>(17)</sup>.

The regression analysis revealed that practicing the religion of interest, being employed, have a larger number of people contributing to the income, as well as receiving outpatient follow-up in the health service, are factors that contribute to greater physical well-being. Furthermore, being unemployed resulted in reduced spiritual well-being. A research with 52 intestinal ostomy patients from Pouso Alegre, Minas Gerais, showed that the spirituality and religion acted by strengthening the self-care and rehabilitation of those patients<sup>(21)</sup>. This highlights the religion as an important tool for the adaptation of the new reality brought with the ostomy and its care, since it reduces anxiety and helps the individual to reframe his/her life and the events related to it<sup>(6)</sup>.

In relation to the income and its interface with the quality of life, a study with 54 intestinal ostomy individuals in Goiânia (Goiás) found a significant correlation between increased monthly income and better quality of life<sup>(9)</sup>. Due to illness, especially in cases of colorectal cancer, and the subsequent ostomy, many

individuals commonly cease to exercise labor activities for fear of social exposure or the feeling of inability to work, which may lead to the emergence of financial difficulties, especially if the patient is the main provider<sup>(6)</sup>. Therefore, having other people to contribute to the household income may reduce the economic difficulties faced by the patient and his/her family. Nevertheless, having a paid job can improve the quality of life in the physical field, by facilitating access to the prescribed treatment and clinical appointments at outpatient clinics effectively and frequently.

The greater the age, the lower the psychological well-being of ostomy patients. In the same way, increased age led to lower quality of life in the Social Well-Being domain. On the other hand, the greater the time since the surgery, the greater psychological well-being of those patients. A research conducted with 57 ostomy patients in Turkey, through the Stoma Quality of Life Scale, found a negative correlation between age and quality of life in the subscale sexuality/body image ( $r=-0,305$ ,  $P<0.05$ ), a psychological component related to the quality of life of this population<sup>(9)</sup>. Concerning the time since the surgery to place the stoma, after evaluation at two points in time (3 and 6 months after surgery), researchers identified an improvement in the quality of life of patients as time passed, but with maintenance of involvement in social, private and financial life<sup>(11)</sup>.

The increase of age may imply a greater degree of dependence for the self-care with the stoma and the collector, requiring more time and attention from family and health professionals involved in the care. In this way, the patient commonly feels as a burden to family and caregivers, affecting his/her self-esteem and effectiveness of the therapy. About this, after the completion of the colostomy, patients experienced a period of emotional or psychological changes, which, without the support from family members and healthcare professionals, culminated in anxiety and depression<sup>(6,11)</sup>.

An important limitations of the study is its cross-sectional design, which does not allow asserting causality of sociodemographic and

clinical factors with the quality of life of ostomy patients. Moreover, due to its convenience sampling, that is, a non-probabilistic sampling, the results should be carefully interpreted. There also stands out the lack of previous studies analyzing the relationship between sociodemographic and clinical factors and quality of life to compare the findings.

## Conclusion

The sociodemographic and clinical factors contribute to changes in the overall quality of life or its domains in intestinal ostomy patients. These factors are: age, practice of religion, unemployment, non-smoker, receiving outpatient follow-up, the number of people who contribute to the family income, time since the surgery and sex. In this sense, there is need for a specialized and humanized health care that meets the specificities of intestinal ostomy patients regarding clinical and sociodemographic factors associated with quality of life. For this reason, it is important to rethink existing policies and programs, as well as to draw new proposals, in order to control and prevent factors that affect the daily treatment and quality of life of those patients.

In this context, longitudinal researches with probabilistic sampling should be developed, in order to confirm the causal relationship between the variables and enable a more secure generalization of the findings. In addition, considering that clinical aspects, such as reception of collectors and outpatient follow-up after the ostomy, affect the patients' quality of life, it is important to develop health care programs that ensure an ongoing, integral and equitable care with intestinal ostomy patients.

## Collaborations:

1 – conception, design, analysis and interpretation of data: Cristilene Akiko Kimura, Rodrigo Marques da Silva and Dirce Bellezi Guilhem;

2 – writing of the article and relevant critical review of the intellectual content: Cristilene Akiko Kimura, Rodrigo Marques da Silva,

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3 – final approval of the version to be published: Cristilene Akiko Kimura, Rodrigo Marques da Silva, Dirce Bellezi Guilhem and Karina Ribeiro Modesto.

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