

Quality of life of women with chronic pelvic pain***Qualidade de vida de mulheres com dor pélvica crônica**

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ABSTRACT

The objective of this cross-sectional study was to compare the quality of life and socioeconomic characteristics of women with and without pelvic pain and investigate clinical and surgical findings about women with chronic pelvic pain. Data were collected in a public hospital in Goiânia, Goiás, Brazil. Pain intensity was measured using the visual analogical scale, whereas quality of life was assessed through the SF-36. Most women classified pain as intensive (52%) and lived with pain for 8.8 (± 7.7) years. Women belonging to the group of chronic pelvic pain scored less in all dimensions evaluated by the SF-36 ($p < 0.05$), except for the mental health dimension, when compared to the painless group. Correlation was negative ($p = 0.017$) between pain intensity and the SF-36 bodily pain dimension. Pelvic pain presented significant negative impact on quality of life with losses to the physical and mental health of women.

Descriptors: Quality of Life; Pelvic Pain; Women's Health; Nursing Care.

RESUMO

Os objetivos deste estudo transversal foram comparar a qualidade de vida e as características socioeconômicas de mulheres com e sem dor pélvica e investigar achados clínicos e cirúrgicos de mulheres com dor pélvica crônica. Os dados foram coletados em um hospital público, de Goiânia/GO, Brasil. A intensidade da dor foi aferida pela escala analógica visual e qualidade de vida avaliada pelo SF-36. A maioria das mulheres classificou a dor como intensa (52%) e conviviam com a dor há 8,8 ($\pm 7,7$) anos. Mulheres do grupo com dor pélvica crônica apresentaram escores inferiores em todas as dimensões avaliadas pelo SF-36 ($p < 0,05$), exceto na dimensão saúde mental, quando comparado com o grupo sem dor. A correlação foi negativa ($p = 0,017$) entre a intensidade da dor e a dimensão dor do SF-36. A dor pélvica apresentou impacto negativo significativo na qualidade de vida, com prejuízos para a saúde física e mental das mulheres.

Descritores: Qualidade de Vida; Dor Pélvica; Saúde da Mulher; Cuidados de Enfermagem.

INTRODUCTION

Chronic pelvic pain (CPP) stands out among chronic health conditions affecting women of reproductive age. It is defined as acyclic pain, either constant or intermittent, located on the lower abdomen or pelvis for at least six months, not exclusively associated with menstruation, sexual intercourse or pregnancy⁽¹⁻³⁾.

Scientific evidences point to CPP as a public health problem that generates direct and indirect costs to women's health and health systems⁽⁴⁾. In the United States, the estimated annual expenses to treat women with CPP were around \$881.5 million⁽⁴⁾ whereas in England the annual expense was estimated in £158 million⁽⁴⁾.

Chronic pelvic pain is one of the most common chronic conditions among women and can seriously affect their quality of life (QoL), including aspects related to physical functioning, psychological well-being and interpersonal relationships⁽⁵⁾. Other studies describe CPP as a debilitating chronic condition that causes bodily pain and can lead to emotional disorders such as depression, anxiety, insomnia and sexual dysfunctions, besides affecting women's QoL^(3,6-8).

Nonetheless, there are few population-based studies on the prevalence of CPP in the world and its effects on the quality of life and health of women. The prevalence of CPP is hard to be determined because its clinical definition presents significant variations⁽⁵⁾. According to a review by Latthe and collaborators to the World Health Organization (WHO), the prevalence of this condition worldwide ranges from 2% to 24%⁽⁹⁾.

Previous studies described the estimated prevalence of CPP among women in the range from 12% to 30%^(5,10). However, a recent systematic review study found CPP prevalence rates ranging from 5.7% to 26.6%, including countries that had never published population-based studies on the CPP prevalence, such as Ghana, Egypt, Austria, Australia and Brazil⁽¹¹⁾. According to that study, many countries and regions miss baseline data on CPP. This shortage could be explained by the lack of interest of

health professionals and researchers in carrying out studies on the topic, since CPP may have a complex nature and given the lack of knowledge on the subject.

Although CPP is a global condition that affects women in a broad age group, data available on its prevalence are still limited and, in Brazil, there is only one study that investigated women over 14 years old and women of reproductive age, finding rates of 11.5% and 15.1%, respectively⁽¹²⁾.

The etiology of CPP is not completely understood⁽⁶⁾ and it could be related to chronic processes of complex interaction among the gastrointestinal, urologic, genital and musculoskeletal systems^(6,13). Moreover women with CPP usually report co-existing diseases such as endometriosis, pelvic inflammatory disease, pelvic adhesions, irritable bowel syndrome, interstitial cystitis and fibromyalgia^(6,10,13-14).

Chronic pelvic pain is an important cause of morbidity among women⁽⁹⁾ that could limit their functionality and well-being and, yet, few studies, mainly in Brazil, assess the quality of life related to the health of women with CPP^(8,15-16). This study had the aim to compare QoL and the sociodemographic and economic characteristics of women with and without chronic pelvic pain, and to investigate clinical and surgical findings about women with chronic pelvic pain.

MATERIAL AND METHOD

This analytical cross-sectional study was developed at the gynecology outpatient care unit of a large hospital that is reference in CPP care through the Unified Health System (SUS, as per its acronym in Portuguese) in the municipality of Goiania, in the state of Goiás, Brazil. Data were collected from October 2009 to May 2010.

The sample of this study was made up of 100 women divided into two groups, namely with chronic pelvic pain and without chronic pelvic pain. Sample calculation was based on representative sampling⁽¹⁷⁾, as follows: $n_0 = 1/E_0^2$; $n = N \times n_0 / N + n_0$, where n_0 is the first approximation to the sample size, E is the tolerable sample error (0.1), n is

the sample size, and N is the population size (96 patients/month during the data collection period). Thus, the size of the representative sample to each group was 50.

The criteria for inclusion of women in the CPP group were as follows: being 18 years old or older, and having a diagnosis of chronic pelvic pain. For the non-CPP group, the criteria were: being 18 years old or older; being under care in the family planning outpatient care unit, and having no complaint of CPP. Both groups excluded women with a pregnancy history in the past 12 months or under treatment of malign neoplasia.

The research was approved by the Research Ethics Committee of the institution where the study was developed, under protocol 082/2009, and complied with legal ethical aspects of Brazilian laws on research with human subjects. All participants agreed on participating and signed a free and informed consent form.

Data were collected by means of structured interviews that gathered socio-demographic and economic data, clinical characteristics of pain (location of pain, factor of worsening and improvement, time of pain, if pain is related to the menstrual period, if patient presents dysuria and practices physical activity), data related to surgery treatment of pain (number of CPP-related surgeries performed, if life got better after surgical treatment, and other surgeries undergone).

Pain intensity was investigated through the Visual Analogical Scale (VAS) which is unidimensional, easily understood and commonly used in clinical practice⁽¹⁸⁾. The scale is graduated from 0 to 10, where zero corresponds to absence of pain and 10 to the worst pain possible. The scale assesses pain intensity ranking it as absence of pain (zero), slight pain (one to three), moderate pain (four to seven) and intense pain (eight to ten)⁽¹⁸⁾.

Quality of life was evaluated using the Medical Outcomes Study 36® - Item Short Form Health Survey (SF-36) questionnaire⁽¹⁹⁾. This is a generic, multi-dimension instrument to assess QoL, which has reliable

psychometric properties⁽¹⁹⁾. It was translated into Portuguese⁽²⁰⁾ and validated. The instrument was employed by several studies on different types of diseases and/or chronic conditions in the last 20 years⁽¹⁹⁻²⁰⁾. A systematic review of literature in the United Kingdom found that the SF-36 was the most popular instrument to assess the QoL of women with CPP⁽²¹⁾.

The SF-36 assesses the individuals' perceptions about their lives in relation to their health in the past four weeks. It is composed of 36 items pooled into eight dimensions: physical functioning; physical role functioning; bodily pain; general health perceptions; vitality; social role functioning; emotional role functioning; and mental health, which makes up the physical health component (PHC) and the mental health component (MHC). The SF-36 score ranges from 0 to 100, where zero corresponds to the worst health status and 100 to the best⁽¹⁹⁾. The mean score for each SF-36 dimension was calculated and analyzed, in separate, as proposed by the instrument creators⁽¹⁹⁾.

Descriptive analyses of simple frequency were performed to the nominal variables of position (mean) and dispersion (standard deviation) of numerical variables. Student's t test of mean comparison was used to evaluate significant differences among continuous numerical variables and the Spearman's correlation coefficient was used to evaluate the association between the SF-36 dimensions and pain intensity. Chi-square test was employed to the remainder variables. Values of $p \leq 0.05$ were considered to be statistically significant.

RESULTS

The mean age of women with CPP was 41.65 ± 9.42 years, whereas for women without CPP it was 28.97 ± 6.68 years. The mean family monthly income of women with CPP was $R\$1,411.30 \pm 924.9$, and for the non-CPP group it was $R\$1,007.40 \pm 464.09$.

Both groups had a predominance of women with secondary education, non-white and living with a permanent partner. Most participants were economically

active mainly in the field of housekeeping services. These women were responsible for the family income and had two children. However, when it comes to housing it was

found that most of the women with CPP (76%) lived in their own properties, whereas women without CPP (56%) did not live in their own properties ($p<0.0011$) (Table 1).

Table 1: Sociodemographic characteristics of women with and without chronic pelvic pain. Goiânia, Goiás, Brazil, 2009 - 2010.

Characteristics	With CPP (n=50)		Without CPP (n=50)		p*
	n	%	n	%	
Schooling					
≤ 7 years	22	44	15	30	0.1471
>7 years	28	56	35	70	
Race / Ethnicity					
White	21	42	23	46	0.8403
Non-white	29	58	27	54	
Marital status					
Has a partner	39	78	36	72	0.4884
Does not have a partner	11	22	14	28	
Occupation					
Housekeeping services	23	46	20	40	0.5445
Other	27	54	30	60	
Employment status					
Active	49	98	50	100	0.3149
Inactive (retirement and leaves)	1	2	0	0	
Responsible for the income					
Participant	32	64	29	58	0.5385
Others	18	36	21	42	
Own property					
Yes	38	76	22	44	0.0011
No	12	24	28	56	
Number of children					
Up to two children	32	64	40	80	0.0748
More than two children	18	36	10	20	

*Chi-square test

As regards clinical aspects associated with CPP, 52% of women reported intensive bodily pain and 48% reported moderate bodily pain. The mean time of bodily pain was 8.8 ± 7.7 years. To relieve bodily pain, 78% reported to use ordinary painkillers, and 62% reported improvement in their lives after starting to take medicine.

Among women with CPP, 39% reported pain on the left iliac fossa (LIF) and 35% on the lower abdomen (LA). Sexual intercourse (32%) and physical effort (29%) were quoted as factors that worsened pain. Among the factors of improvement, the use of painkillers (47%) and rest (25%) were identified. Seventy percent of women stated to feel pain more intensely during the menstrual period.

In the participants' view, delivery (25%), emotional state (14%), stress (14%) and trauma from physical and/or sexual trauma (7%) were factors that contributed to

trigger CPP. It was observed that 28% of the women underwent surgery to treat pain. For 57% of these women, life had not changed after surgical treatment. Dysuria was more frequent among women with CPP (48%; $p<0.01$). Regarding physical activity, results showed that most of the women in both groups were not engaged in physical exercises (68% with CPP and 66% without CPP, $p=0.83$).

The evaluation of quality of life in the group with pain found that dimensions scoring below 50 were: mental health (47.9 ± 17.9), vitality (40.9 ± 21.7), bodily pain (39.3 ± 15.6), physical role functioning (33.5 ± 38.7) and emotional role functioning (29.3 ± 37.3). The mental health component scored lower (42.72 ± 10.2) in relation to the physical health component (45.62 ± 10.9). The comparison between both groups showed that women

with CPP scored lower in all dimensions assessed by the SF-36 ($P < 0.05$), except for the mental health dimension ($p = 0.0530$) (Table 2). Differences were still greater ($p \leq 0.003$) for the dimensions: physical functioning, physical role functioning, bodily pain, general health

perceptions, vitality and emotional role functioning (Table 2).

A negative correlation ($p = 0.017$) was found between pain intensity and the SF-36 bodily pain dimension (Table 3).

Table 2: Comparison of mean scores for the SF-36 dimensions of women with and without chronic pelvic pain. Goiânia, Goiás, Brazil, 2009 - 2010.

SF-36	Group with CPP (n=50)	Group without CPP (n=50)	p*
	Mean (\pm SD)	Mean (\pm SD)	
Dimensions			
Physical functioning	56.5 (\pm 22.0)	78.1 (\pm 20.7)	< 0.0001
Physical role functioning	33.5 (\pm 38.7)	71.0 (\pm 32.3)	<0.0001
Bodily pain	39.3 (\pm 15.6)	61.1 (\pm 21.6)	<0.0001
General health perceptions	53.1 (\pm 20.9)	66.9 (\pm 21.3)	0.0015
Vitality	40.9 (\pm 21.7)	54.6 (\pm 23.5)	0.0031
Social role functioning	52.8 (\pm 24.1)	63.5 (\pm 26.3)	0.0358
Emotional role functioning	29.3 (\pm 37.3)	60.0 (\pm 39.8)	0.0001
Mental Health	47.9 (\pm 17.9)	55.3 (\pm 19.7)	0.0530
Components			
Physical health	45.62 (\pm 10.9)	69.29 (\pm 7.1)	0.0111
Mental Health	42.72 (\pm 10.2)	58.34 (\pm 4.2)	0.0468

CPP: Chronic Pelvic Pain; *Student's t test

Table 3: Correlation between the SF-36 dimensions and bodily pain intensity in women with CPP. Goiânia, Goiás, Brazil, 2009 - 2010.

SF-36 Dimensions	Bodily Pain Intensity	
	r	p*
Functional functioning	- 0.146	0.310
Physical role functioning	0.099	0.494
Bodily Pain	- 0.337*	0.017
General health perceptions	- 0.156	0.818
Vitality	- 0.033	0.280
Social role functioning	- 0.070	0.627
Emotional role functioning	0.082	0.571
Mental Health	- 0.174	0.227

* Significant Spearman's Correlation $p < 0.05$.

DISCUSSION

Chronic pelvic pain is a condition that affects women's health throughout their lives and should be better understood in the context of care to those women. The results of this and other studies about the topic show that, in general, women with CPP are in the age group of 15 to 73 years^(6,14). In the group investigated, bodily pain intensity was ranked as moderate and intense and, as described in other studies, these women took a long time to perceive pain as a discomfort that needed continuous clinical monitoring and care to promote their well-being^(3,5,22).

The study also identified that most women with CPP take painkillers everyday and refer to this intervention as the main factor of pain relief⁽²³⁾. Dysuria was more frequent among women with CPP than in the control group. This finding is in line with another study where authors referred to the association between CPP and urinary symptoms like dysuria and painful sensation⁽²⁴⁾.

The evaluation of health-related quality of life showed that, among women with CPP, pain had a negative impact on their satisfaction with life, interfering with physical and emotional well-being, and reducing productivity in work and everyday tasks^(3,8,15). Although

this study found no statistically significant difference for the mental health scores in both groups, women with CPP scored lower in all other dimensions assessed. Here, the sample size may have influenced on the result.

These results confirm the evidences found in other studies that identified that women with CPP typically score lower in QoL^(8,15-16). Researchers found that increased bodily pain reduces QoL and the worst affected domains were physical role functioning and mental health⁽²²⁾. In another study about CPP and QoL⁽²³⁾, researchers, after monitoring this chronic condition for a long time, reported that bodily pain remained the main problem among women. Another aspect observed was that women with CPP perceived negative effects on their physical and mental health with significant decrease in their productive and social lives^(3,22).

The social role functioning dimension evaluated physical health problems or emotional disorders that interfered with social activities. This study found significant damages to the social life of women with CPP, in line with previous studies^(8,15). The vitality dimension analyzed the subjective perception about health, if people are full of life, have energy or are tired and exhausted. Women with CPP presented lower vitality. It was also found that women with CPP, even in the presence of pain, continued engaging in social and everyday activities, despite the potential lack of sympathy of those living with them⁽²²⁾.

One limitation of the study was the impossibility of benchmarking with the control group since during the data collection process differences were observed regarding the age group of women in the control group. In addition, it is worth mentioning that this study was

designed in a cross-sectional design, which allow for associations between variables rather than cause and effect relationships. This study, however, supports the observation of other Brazilian studies according to which the CPP affects the QoL of Brazilian women^(8,15-16).

CONCLUSION

Results show that chronic pelvic pain had a negative impact on quality of life with damages to women's physical and mental health. Although results cannot be generalized, they pointed out gaps of knowledge about this chronic symptom that is sometimes neglected and underexplored, despite being frequent among women.

In this context, the discussion about clinical and therapeutic aspects, as well as demands to provide care to women with CPP, should be expanded and broadened. This brings about the need for adopting health care models that consider the women's needs and use health interventions in a comprehensive and holistic way to relieve pain, emphasizing the promotion of well-being and preservation of women's global functioning.

The production of evidence on this topic will contribute with the improvement of the health care model focused on women suffering from this chronic condition to provide them with proper treatment to relieve suffering that is many times solitary and silent. To deepen understanding on the CPP clinical importance, population-based epidemiological studies should be developed to identify the prevalence of chronic pelvic pain among the Brazilian women and identify the main factors associated with this chronic condition. Moreover, the experience lived by these women to cope with chronic pelvic pain in their lives must be understood.

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