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RESEARCH

Profile and quality of life of women in pelvic floor rehabilitation

Perfil e qualidade de vida de mulheres em reabilitação do assoalho pélvico

Perfil y calidad de vida de mujeres en rehabilitación del piso pélvico

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ABSTRACT

Objective: Describe the sociodemographic, clinical, and sexual profile, identify profile variables that affect the Health-Related Quality of Life (HRQoL), and evaluate the correlation between two HRQoL questionnaires used in a pelvic floor rehabilitation program. **Method:** This is an observational, analytical, and cross-sectional study, based on patient records and two questionnaires for HRQoL evaluation. **Results:** Women presented a mean age of 55.4 years; were married; white; had stress, urge, or mixed urinary incontinence (UI) of moderate to large urine release; and daily or diurnal UI. Only 50.5% had an active sex life and most had sexual complaints. The change in sexual activity and some types of UI affected the HRQoL. The two questionnaires presented a correlation. **Conclusion:** The profile and correlation between the questionnaires are consistent with the literature. The type of UI and changes in sexual activity affect the HRQoL. **Descriptors:** Pelvis Diaphragm; Nursing; Urinary Incontinence; Quality of Life; Women's Health.

RESUMO

Objetivo: Descrever o perfil sociodemográfico, clínico e sexual, identificar variáveis do perfil que interferem na Qualidade de Vida Relacionada à Saúde (QVRS) e avaliar correlação entre dois questionários de QVRS usados em um Programa de Reabilitação do Assoalho Pélvico. **Método:** Estudo observacional, analítico e transversal, com base em fichas de atendimento e dois questionários de avaliação da QVRS. **Resultados:** As mulheres possuíam idade média de 55,4 anos, eram casadas, brancas, tinham incontinência urinária (IU) de esforço, de urgência ou mista, com perdas urinárias de moderada a grande quantidade, diárias e diurnas. Apenas 50,5% tinham vida sexual ativa e a maioria apresentava queixas sexuais. A mudança na atividade sexual e alguns tipos de IU afetaram a QVRS. Os dois questionários apresentaram correlação. **Conclusão**: O perfil e a correlação entre os questionários condizem com a literatura. Tipo de IU e mudança na atividade sexual afetam a QVRS.
Descritores: Diafragma da Pelve; Enfermagem; Incontinência Urinária; Qualidade de Vida; Saúde da Mulher.

RESUMEN

Objetivo: Describir el perfil sociodemográfico, clínico y sexual; identificar variables del perfil que interfieren en la Calidad de Vida Relacionada a la Salud (CVRS) y evaluar correlación entre dos cuestionarios de CVRS usados en un Programa de Rehabilitación del Piso Pélvico. **Método**: Estudio observacional, analítico, transversal, basado en fichas de atención y en dos cuestionarios de evaluación de CVRS. **Resultados**: La media etaria de las mujeres era de 55,4 años, casadas, blancas, con incontinencia urinaria (IU) de esfuerzo, de urgencia o mixta, con pérdidas urinarias de moderada a gran cantidad, diarias y diurnas. Solo 50,5% llevaba vida sexual activa. La mayoría expresaba quejas sexuales. El cambio en la actividad sexual y algunos tipos de IU afectaron la CVRS. Los cuestionarios demostraron correlación. **Conclusión**: El perfil y la correlación entre ambos cuestionarios concuerdan con la literatura. El tipo de UI y los cambios en la actividad sexual afectan la CVRS.
Descriptores: Diafragma Pélvico; Enfermería; Incontinencia Urinaria; Calidad de Vida; Salud de la Mujer.

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INTRODUCTION

The prevalence of urinary incontinence (UI) among women varies from 25% to 30%[1]. Women with UI report physical and social limitations. In addition to having a negatively affected emotional state and social life, they are strongly impacted by the disease in terms of health-related quality of life (HRQoL)[2].

Learning about the profile and evaluating the impact of UI on the HRQoL of these women allows for a better understanding of the patient's point of view. In addition, identifying and characterizing factors related to HRQoL in women with UI can lead to the development of preventive, diagnostic, and therapeutic strategies to improve the QoL of this population[2] and may help identify predictors for the definition of treatment options[3].

The Pelvic Floor Rehabilitation Program (PFRP) is an extension project that helps women with UI and other pelvic floor disorders; and trains undergraduates, postgraduates, and health professionals for the provision of care to such women. It uses health education strategies and promotes pelvic floor muscle training and electrotherapy through individual activities performed by the nurse for the treatment and prevention of these disorders. In this program, the process of evaluation and measurement of treatment results is performed using proper instruments, such as the bladder diary and the tampon test, and HRQoL evaluation questionnaires specifically used for UI already validated in Brazil: the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF); and the King's Health Questionnaire (KHQ).

HRQoL is an important aspect in the evaluation of the results of the UI treatment. However, the questionnaires to be applied should be validated and reliable, which can add relevant information to clinical practice and that are easily applicable[4]. For this reason, these specific questionnaires for patients with UI and lower urinary tract symptoms (LUTS) were selected.

Considering the above, the objectives of this study were to describe the sociodemographic, clinical, sexual and HRQoL profile of women treated in the PFRP; evaluate which characteristics of the profile affect the HRQoL; and check for a correlation between the results obtained with the application of the two HRQoL questionnaires used in this program. The correlation between the two questionnaires was evaluated in the processes of translation and validation in Portuguese[5], but it is recommended to confirm the results in a different population.

OBJECTIVES

Primary objective

To describe the sociodemographic, clinical, sexual, and HRQoL profile of women from the PFRP.

Secondary objectives

To evaluate which characteristics of the profile affect the HRQoL and verify if there is a correlation between the results obtained with the application of the two HRQoL questionnaires used in this program.

METHOD

Ethical aspect

The study was approved by the Research Ethics Committee of Universidade Estadual de Campinas.

Study design

This is an observational, analytical, and retrospective study.

Study site

Data were obtained from patient records and through the application of HRQoL questionnaires given to women who started treatment for UI in the PFRP at a basic healthcare unit in the municipality of Campinas, São Paulo. The description of patients seen there and the protocols have already been published[6].

Participants and sample size

The study included HRQoL records and questionnaires that corresponded to the initial care provided in the PFRP, which presented sociodemographic data, records of signs and symptoms of UI or lower urinary tract symptoms, evaluation of complaints, sex life information, physical examination, and HRQoL assessment. The study sample consisted of the records of 94 women seen in the PFRP from March 2007 to December 2016.

Variables

According to the study objectives, the following independent variables were selected from patient records: sociodemographic characteristics (age, marital status, color, schooling); clinical characteristics (weight and BMI); types of UI (stress UI [SUI], urge UI [UUI], mixed UI [MUI], and nocturnal enuresis); amount of urine release (drops, small, moderate, large); frequency of urine release (sporadically, at least once a month, at least once a week, daily); period of the day when urine was lost (day, night, day and night); comorbidities; sexual activity (active or inactive); sexual problems (vaginal dryness, dyspareunia); urine release during intercourse or coital incontinence (yes or no); self-assessment of sex life (very good, good, satisfactory, bad, very bad); changes in sexual activity due to UI (yes or no). The QoL scores of the KHQ questionnaire were defined as dependent variables. The sociodemographic, clinical, and sexual profile variables were analyzed only in relation to the KHQ domains. In addition to these eight domains, the Severity Measures (SM) scale was included in the analysis, as performed in a previous study[7].

Data measurement

The ICIQ-SF is composed of four questions, which add up to 21 points as follows: assessment of urine release frequency (0-5 points); amount of urine release (0-6 points); impact of UI on the QoL (0-10 points); and a self-diagnosis of the perception of incontinence causes. The ICIQ-SF score is calculated adding the scores of questions 3, 4, and 5. The scores range from 0 to 21; the higher the score obtained, the worse the QoL[7].

The KHQ has 26 questions grouped in eight domains, as follows: General health perception (GHP–1 item); Incontinence impact (II-1 item); Role limitations (RL–2 items); Physical limitations (PL–2 items); Social limitations (SL–2 items); Personal relationships (PR–3

items); Emotions (E–3 items); and Sleep/energy (S/E–2 items)[5]. In addition to these domains, the KHQ includes two independent scales: Severity measures, which evaluates the UI severity; and the Symptom severity scale, which analyzes the presence and intensity of urinary symptoms. The analysis is based on each domain, so there is no general score. The eight domains are scored between 0 and 100; higher scores indicate worse QoL in that domain[5].

Data analysis

In addition to the descriptive analysis of the variables, the Spearman's coefficient was calculated verify if there is a correlation between the ICIQ-SF score and the KHQ domains and severity measures; and a correlation between the profile characteristics and the QoL. Non-parametric Mann-Whitney or Kruskal-Wallis tests were used to evaluate the interference of the following variables in the QoL: SUI; UUI; MUI; nocturnal enuresis; sexual activity; vaginal dryness; dyspareunia; and change in sexual activity.

RESULTS

In addition to patient records, the HRQoL questionnaires of 94 women were analyzed. The mean age of participants was 55.4 (SD = 16.24) years. Most of them were married (50.5%), with incomplete high school (55.3%), and white (86.5%). Their mean weight was 69.87 kg (SD = 15.78) and BMI was 28.36 (SD = 6.01). The most frequent types of UI were SUI (77.7%) and UUI (53.2%). As MUI refers to simultaneous occurrence of the two types, some cases were MUI (43 cases, or 45.7%). Most of them reported moderate to large urine release (58.1%), daily (71.8%), and diurnal (51.2%). Regarding sexual activity, most of them were sexually active (50.5%), and complained of vaginal dryness (54.8%) and dyspareunia (50.9%), but considered their sex life as good or optimal (54%). Regarding coital incontinence, 38.6% reported urine release during intercourse. Most of them (68.8%) did not report changes in sexual activity due to UI, including cases with and without coital incontinence. Regarding comorbidities, they presented systemic arterial hypertension (SAH) more frequently (45.7%).

Table 1 shows the significant correlations between sociodemographic variables and KHQ domains. The correlations are weak, with negative correlations between age and social limitations and between age and sleep/energy.

Table 1 – Significant correlations between the sociodemographic variables and the King's Health Questionnaire domains among women attending the Pelvic Floor Rehabilitation Program, Campinas, São Paulo, Brazil, 2016

Correlation	Coefficient*	*p* value	n
Weight x Role limitations	0.3223	0.0128	59
Age x Social limitations	-0.3012	0.0194	60
Age x Sleep/energy	-0.2337	0.0451	74
Weight x Severity measures	0.2723	0.0405	57

*Note: *Spearman's correlation coefficient.*

A correlation was observed between practically all KHQ domains and ICIQ-SF scores, except for the domains of general health perception and personal relationships. For the domains of incontinence impact ($r = 0.5058$, $p < 0.0001$), physical limitations ($r = 0.5776$, $p < 0.0001$), and severity measures ($r = 0.6016$, $p < 0.0001$), the correlation was positive and moderate (Table 2).

Table 2 – Correlation between the score from the International Consultation on Incontinence Questionnaire-Short Form and the King's Health Questionnaire domains among women attending the Pelvic Floor Rehabilitation Program, Campinas, São Paulo, Brazil, 2016

ICIQ-SF/KHQ	Coefficient*	*p* value	n
General health perception	-0.0233	0.8448	73
Incontinence impact	0.5058	**< 0.0001**	73
Role limitations	0.3221	0.0062	71
Physical limitations	0.5776	**< 0.0001**	70
Social limitations	0.4081	0.0013	59
Personal relationships	0.3119	0.0533	39
Emotions	0.4913	**< 0.0001**	73
Sleep/energy	0.4513	**< 0.0001**	73
Severity measures	0.6016	**< 0.0001**	68

*Note: *Spearman's correlation coefficient.*

Chart 1 below shows the comparisons between the KHQ domains and UI types. Considering the different UI types, the impact was higher in participants with UUI ($p = 0.0117$) or MUI ($p = 0.0020$). The same was observed between Role limitations and UUI ($p = 0.0147$) and MUI ($p = 0.0259$), and between Severity measures and MUI ($p = 0.0104$). Nocturnal enuresis had an impact on the following domains: Role limitations ($p = 0.0063$); Physical limitations ($p = 0.0163$); Emotions ($p = 0.0070$); and Severity measures ($p = 0.0048$). Missing data due to unanswered questions led to varied numbers of responses in Chart 1.

It should be noted that, because the symptom presence or absence was analyzed, some cases presented concomitant SUI and MUI or UUI and coital incontinence. Although coital incontinence is a type of UI[8], its related data are presented in Chart 2, which shows the variables related to sexual activity.

Chart 2 shows the comparisons between the KHQ domains and aspects related to sexual activity. Missing data due to unanswered questions led to varied numbers of responses in Chart 2. Changes in sexual activity due to UI affected six KHQ domains: Incontinence impact ($p = 0.0069$); Physical limitations ($p = 0.0015$); Social limitations ($p = 0.0235$); Personal relationships ($p = 0.0004$); Emotions ($p < 0.0001$); and Sleep/energy ($p = 0.0084$). Severity measures also had an impact on this variable ($p = 0.0006$).

Chart 1 – Comparisons between the King's Health Questionnaire domains and the urinary incontinence types, Campinas, São Paulo, Brazil, 2016

Domain	SUI	n	Mean	Standard deviation	Min.	Q1	Median	Q3	Max.	*p* value*
GHP	Yes	62	38.71	19.03	0.00	25.00	25.00	50.00	75.00	0.8376
	No	14	39.29	21.29	25.00	25.00	25.00	50.00	75.00	
II	Yes	62	62.37	33.32	0.00	33.33	66.67	100.00	100.00	0.6887
	No	14	59.52	32.50	33.33	33.33	33.33	100.00	100.00	
RL	Yes	59	42.37	34.51	0.00	16.67	33.33	66.67	100.00	0.8465
	No	13	42.31	41.73	0.00	0.00	33.33	83.33	100.00	
PL	Yes	59	40.68	35.32	0.00	0.00	33.33	66.67	100.00	0.6724
	No	12	37.50	42.71	0.00	0.00	25.00	83.33	100.00	
SL	Yes	50	22.44	26.98	0.00	0.00	11.11	33.33	88.89	0.9835
	No	10	25.56	32.73	0.00	0.00	11.11	55.56	77.78	
PR	Yes	32	30.21	32.91	0.00	0.00	33.33	41.67	100.00	0.3339
	No	8	52.08	48.34	0.00	0.00	58.33	100.00	100.00	
E	Yes	61	38.62	32.18	0.00	11.11	33.33	66.67	100.00	0.4432
	No	12	48.15	37.41	0.00	22.22	33.33	83.33	100.00	
S/E	Yes	61	37.16	28.93	0.00	16.67	33.33	50.00	100.00	0.6067
	No	13	32.05	28.43	0.00	16.67	33.33	33.33	100.00	
SM	Yes	58	48.16	25.07	0.00	26.67	46.67	66.67	100.00	0.4990
	No	11	44.24	23.53	20.00	26.67	46.67	60.00	100.00	
Domain	**UUI**	**n**	**Mean**	**Standard deviation**	**Min.**	**Q1**	**Median**	**Q3**	**Max.**	***p* value***
GHP	Yes	42	37.50	20.10	0.00	25.00	25.00	50.00	75.00	0.4078
	No	34	40.44	18.48	0.00	25.00	50.00	50.00	75.00	
II	Yes	42	70.63	28.71	0.00	33.33	66.67	100.00	100.00	0.0117
	No	34	50.98	35.04	0.00	33.33	33.33	100.00	100.00	
RL	Yes	42	50.40	34.63	0.00	33.33	41.67	83.33	100.00	0.0147
	No	30	31.11	34.39	0.00	0.00	16.67	66.67	100.00	
PL	Yes	41	45.12	38.59	0.00	0.00	50.00	83.33	100.00	0.2564
	No	30	33.33	32.46	0.00	0.00	33.33	66.67	100.00	
SL	Yes	36	22.53	24.70	0.00	0.00	16.67	33.33	77.78	0.6204
	No	24	23.61	32.32	0.00	0.00	5.56	44.44	88.89	
PR	Yes	24	39.58	37.04	0.00	0.00	33.33	58.33	100.00	0.1869
	No	18	27.08	36.45	0.00	0.00	8.33	33.33	100.00	
E	Yes	42	42.86	32.05	0.00	22.22	33.33	66.67	100.00	0.3239
	No	31	36.56	34.45	0.00	11.11	33.33	66.67	100.00	
S/E	Yes	42	40.08	26.81	0.00	16.67	33.33	50.00	100.00	0.0568
	No	32	31.25	30.75	0.00	16.67	16.67	50.00	100.00	
SM	Yes	42	51.75	24.14	0.00	33.33	53.33	73.33	93.33	0.0739
	No	27	40.99	24.58	0.00	20.00	40.00	60.00	100.00	
Domain	**MUI**	**n**	**Mean**	**Standard deviation**	**Min.**	**Q1**	**Median**	**Q3**	**Max.**	***p* value***
GHP	Yes	37	38.51	20.06	0.00	25.00	25.00	50.00	75.00	0.9096
	No	39	39.10	18.84	0.00	25.00	25.00	50.00	75.00	
II	Yes	37	73.87	27.37	0.00	66.67	66.67	100.00	100.00	0.0020
	No	39	50.43	34.09	0.00	33.33	33.33	100.00	100.00	
RL	Yes	36	50.93	33.79	0.00	33.33	50.00	75.00	100.00	0.0259
	No	36	33.80	35.74	0.00	0.00	16.67	66.67	100.00	
PL	Yes	35	48.57	38.00	0.00	0.00	66.67	83.33	100.00	0.0802
	No	36	31.94	33.18	0.00	0.00	25.00	58.33	100.00	
SL	Yes	31	23.66	24.97	0.00	0.00	22.22	33.33	77.78	0.3796
	No	29	22.22	30.86	0.00	0.00	0.00	44.44	88.89	

To be continued

Chart 1 (concluded)

Domain	MUI	n	Mean	Standard deviation	Min.	Q1	Median	Q3	Max.	*p* value*
PR	Yes	20	35.83	34.32	0.00	0.00	33.33	50.00	100.00	0.5271
	No	20	33.33	40.10	0.00	0.00	25.00	58.33	100.00	
E	Yes	36	44.83	32.20	0.00	22.22	33.33	72.22	100.00	0.2821
	No	37	36.64	33.83	0.00	11.11	33.33	66.67	100.00	
S/E	Yes	36	41.20	27.74	0.00	16.67	33.33	50.00	100.00	0.0668
	No	36	31.58	29.20	0.00	16.67	16.67	50.00	100.00	
SM	Yes	36	54.63	24.21	0.00	36.67	60.00	73.33	100.00	0.0104
	No	33	39.80	23.18	0.00	20.00	33.33	60.00	100.00	
Domain	**Nocturnal enuresis**	**n**	**Mean**	**Standard deviation**	**Min.**	**Q1**	**Median**	**Q3**	**Max.**	***p* value***
GHP	Yes	23	41.30	20.79	0.00	25.00	50.00	50.00	75.00	0.4622
	No	55	37.74	18.75	0.00	25.00	25.00	50.00	75.00	
II	Yes	23	72.46	27.80	33.33	33.33	66.67	100.00	100.00	0.0742
	No	53	57.23	34.20	0.00	33.33	66.67	100.00	100.00	
RL	Yes	24	59.72	38.04	0.00	33.33	66.67	100.00	100.00	0.0063
	No	48	33.68	31.23	0.00	0.00	33.33	58.33	100.00	
PL	Yes	23	55.07	36.73	0.00	16.67	66.67	100.00	100.00	0.0163
	No	48	32.99	34.29	0.00	0.00	25.00	66.67	100.00	
SL	Yes	20	30.00	32.66	0.00	0.00	22.22	66.67	77.78	0.3558
	No	40	19.44	24.62	0.00	0.00	11.11	33.33	88.89	
PR	Yes	13	30.77	35.25	0.00	0.00	33.33	33.33	100.00	0.7300
	No	27	36.42	38.13	0.00	0.00	33.33	66.67	100.00	
E	Yes	24	55.09	33.65	0.00	27.78	55.56	88.89	100.00	0.0070
	No	49	32.88	30.43	0.00	11.11	33.33	44.44	100.00	
S/E	Yes	24	47.22	33.21	0.00	16.67	41.67	75.00	100.00	0.0625
	No	51	31.00	24.97	0.00	16.67	33.33	50.00	100.00	
SM	Yes	22	60.61	25.52	13.33	46.67	63.33	80.00	100.00	0.0048
	No	47	41.42	22.02	0.00	20.00	40.00	60.00	86.67	

*Note: GHP – General health perception; II – Incontinency impact; RL – Role limitations; PL – Physical limitations; SL – Social limitations; PR – Personal relationships; E – Emotions; S/E - Sleep/energy; SM – Severity measures. *p-value obtained through the Mann-Whitney test.*

Chart 2 – Comparisons between the King's Health Questionnaire domains and the aspects related to sexual activity, Campinas, São Paulo, Brasil, 2016

Domain	Sexual activity	n	Mean	Standard deviation	Min.	Q1	Median	Q3	Max.	*p* value*
GHP	Yes	39	38.46	19.74	0.00	25.00	25.00	50.00	75.00	0.9051
	No	37	39.19	19.13	0.00	25.00	25.00	50.00	75.00	
II	Yes	39	64.10	29.99	0.00	33.33	66.67	100.00	100.00	0.6275
	No	37	59.46	36.12	0.00	33.33	66.67	100.00	100.00	
RL	Yes	39	43.16	34.98	0.00	16.67	33.33	66.67	100.00	0.7827
	No	33	41.41	36.83	0.00	0.00	33.33	66.67	100.00	
PL	Yes	39	41.88	36.25	0.00	0.00	33.33	66.67	100.00	0.5955
	No	33	38.02	36.96	0.00	0.00	33.33	66.67	100.00	
SL	Yes	34	25.82	28.13	0.00	0.00	22.22	44.44	77.78	0.3390
	No	26	19.23	27.32	0.00	0.00	11.11	22.22	88.89	
PR	Yes	34	34.80	34.66	0.00	0.00	33.33	50.00	100.00	-
	No	6	33.33	51.64	0.00	0.00	0.00	100.00	100.00	
E	Yes	38	42.40	32.25	0.00	11.11	33.33	66.67	100.00	0.4515
	No	35	37.78	34.11	0.00	11.11	33.33	68.67	100.00	
S/E	Yes	39	38.03	28.08	0.00	16.67	33.33	50.00	100.00	0.3647
	No	35	34.29	29.69	0.00	16.67	16.67	50.00	100.00	
SM	Yes	35	50.29	23.17	0.00	33.33	46.67	66.67	93.33	0.3133
	No	34	44.71	26.24	0.00	20.00	43.33	60.00	100.00	

To be continued

Chart 2 (concluded)

Domain	Vaginal dryness	n	Mean	Standard deviation	Min.	Q1	Median	Q3	Max.	*p* value*
GHP	Yes	32	36.72	21.05	0.00	25.00	25.00	50.00	75.00	0.7290
	No	22	38.64	16.77	25.00	25.00	25.00	50.00	75.00	
II	Yes	32	62.50	32.52	0.00	33.33	66.67	100.00	100.00	0.7319
	No	22	65.15	34.85	0.00	33.33	66.67	100.00	100.00	
RL	Yes	32	38.54	34.51	0.00	8.33	33.33	66.67	100.00	0.5663
	No	21	45.24	37.69	0.00	16.67	33.33	66.67	100.00	
PL	Yes	31	31.72	33.98	0.00	0.00	16.67	66.67	100.00	0.1260
	No	21	47.62	38.47	0.00	16.67	33.33	66.67	100.00	
SL	Yes	29	19.16	23.17	0.00	0.00	11.11	33.33	77.78	0.3344
	No	15	28.15	29.36	0.00	0.00	22.22	55.56	77.78	
PR	Yes	19	26.32	33.48	0.00	0.00	16.67	50.00	100.00	0.1229
	No	16	42.71	34.94	0.00	25.00	33.33	66.67	100.00	
E	Yes	31	34.41	31.99	0.00	0.00	33.33	55.56	100.00	0.0548
	No	21	50.26	29.53	0.00	33.33	44.44	66.67	100.00	
S/E	Yes	32	32.81	28.55	0.00	16.67	33.33	50.00	100.00	0.1732
	No	21	43.65	29.10	0.00	16.67	33.33	66.67	100.00	
SM	Yes	28	47.62	25.58	0.00	30.00	46.67	60.00	100.00	0.8154
	No	21	48.89	26.02	0.00	33.33	46.67	60.00	100.00	
Domain	**Dyspareunia**	**n**	**Mean**	**Standard deviation**	**Min.**	**Q1**	**Median**	**Q3**	**Max.**	***p* value***
GHP	Yes	25	41.00	20.26	0.00	25.00	50.00	50.00	75.00	0.4982
	No	23	36.96	21.15	0.00	25.00	25.00	50.00	75.00	
II	Yes	25	64.00	33.22	0.00	33.33	66.67	100.00	100.00	0.8196
	No	23	62.32	32.26	0.00	33.33	66.67	100.00	100.00	
RL	Yes	25	37.33	32.73	0.00	16.67	33.33	66.67	100.00	0.3068
	No	21	49.21	38.90	0.00	16.67	33.33	100.00	100.00	
PL	Yes	25	37.33	35.12	0.00	0.00	33.33	66.67	100.00	0.3828
	No	20	47.50	38.34	0.00	8.33	50.00	75.00	100.00	
SL	Yes	21	22.75	24.21	0.00	0.00	22.22	33.33	77.78	0.8044
	No	18	23.46	28.74	0.00	0.00	11.11	44.44	77.78	
PR	Yes	19	27.19	34.79	0.00	0.00	16.67	50.00	100.00	0.2013
	No	15	37.78	31.16	0.00	16.67	33.33	50.00	100.00	
E	Yes	24	37.96	31.58	0.00	11.11	33.33	66.67	100.00	0.2914
	No	21	47.09	30.41	0.00	22.22	44.44	66.67	100.00	
S/E	Yes	25	39.33	28.82	0.00	16.67	33.33	50.00	100.00	0.7961
	No	21	42.86	30.08	0.00	16.67	33.33	66.67	100.00	
SM	Yes	21	51.43	23.68	0.00	40.00	53.33	60.00	93.33	0.7519
	No	21	50.79	27.61	0.00	33.33	46.67	73.33	100.00	
Domain	**Coital incontinence**	**n**	**Mean**	**Standard deviation**	**Min.**	**Q1**	**Median**	**Q3**	**Max.**	***p* value***
GHP	Yes	20	33.75	20.32	0.00	25.00	25.00	50.00	75.00	0.3772
	No	30	40.83	20.22	25.00	25.00	25.00	50.00	75.00	
II	Yes	20	66.67	34.20	0.00	33.33	66.67	100.00	100.00	0.4910
	No	30	61.11	31.66	0.00	33.33	66.67	100.00	100.00	
RL	Yes	20	54.17	38.95	0.00	16.67	66.67	91.67	100.00	0.1783
	No	29	38.51	33.95	0.00	16.67	33.33	66.67	100.00	
PL	Yes	19	46.49	39.51	0.00	0.00	66.67	83.33	100.00	0.5653
	No	28	38.10	34.50	0.00	8.33	33.33	66.67	100.00	
SL	Yes	16	33.33	32.96	0.00	0.00	16.67	66.67	77.78	0.2181
	No	25	18.67	23.73	0.00	0.00	11.11	22.22	77.78	
PR	Yes	15	43.33	36.08	0.00	16.67	33.33	83.33	100.00	0.1994
	No	22	30.30	37.67	0.00	0.00	16.67	50.00	100.00	
E	Yes	20	43.89	27.57	0.00	27.78	33.33	61.11	100.00	0.9579
	No	28	44.44	35.14	0.00	11.11	38.89	72.22	100.00	

To be continued

Chart 2 (concluded)

S/E	Yes	20	44.17	30.24	0.00	25.00	33.33	58.33	100.00	0.2545
	No	29	36.21	30.88	0.00	16.67	33.33	50.00	100.00	
SM	Yes	18	53.33	27.44	0.00	33.33	53.33	80.00	100.00	0.6483
	No	26	49.49	24.01	0.00	33.33	46.67	66.67	100.00	
Domain	**Changes in sexual activity due to UI**	**n**	**Mean**	**Standard deviation**	**Min.**	**Q1**	**Median**	**Q3**	**Max.**	***p* value***
GHP	Yes	13	32.69	18.78	0.00	25.00	25.00	50.00	50.00	0.6740
	No	30	37.50	19.42	0.00	25.00	25.00	50.00	75.00	
II	Yes	13	82.05	22.01	33.33	66.67	100.00	100.00	100.00	0.0069
	No	30	53.33	32.28	0.00	33.33	33.33	66.67	100.00	
RL	Yes	13	51.28	39.36	0.00	16.67	66.67	83.33	100.00	0.3595
	No	29	37.93	34.76	0.00	16.67	33.33	50.00	100.00	
PL	Yes	13	69.23	34.59	0.00	50.00	83.33	100.00	100.00	0.0015
	No	29	28.16	31.53	0.00	0.00	16.67	50.00	100.00	
SL	Yes	11	37.37	28.66	0.00	11.11	33.33	66.67	77.78	0.0235
	No	24	17.59	24.72	0.00	0.00	0.00	27.78	77.78	
PR	Yes	10	63.33	31.23	16.67	33.33	58.33	100.00	100.00	0.0004
	No	23	18.12	24.57	0.00	0.00	0.00	33.33	100.00	
E	Yes	13	72.65	20.60	33.33	55.56	66.67	88.89	100.00	**< 0.0001**
	No	28	26.19	23.27	0.00	11.11	22.22	33.33	100.00	
S/E	Yes	13	56.41	25.04	16.67	50.00	50.00	66.67	100.00	0.0084
	No	29	33.33	28.87	0.00	16.67	33.33	33.33	100.00	
SM	Yes	13	71.28	23.16	20.00	60.00	73.33	86.67	100.00	0.0006
	No	25	40.00	21.52	0.00	26.67	40.00	53.33	80.00	

*Note: GHP – General health perception; II – Incontinency impact; RL – Role limitations; PL – Physical limitations; SL – Social limitations; PR – Personal relationships; E – Emotions; S/E - Sleep/energy; SM – Severity measures; UI – Urinary incontinence. *p-value obtained through the Mann-Whitney test.*

DISCUSSION

UI can affect the QoL of women and their psychological and social wellbeing[9], depending on the severity and type of incontinence, and the number of urine release episodes in women affected by these symptoms[2]. Because it is a multifactorial etiology, UI affects several dimensions of the QoL of women, such as physical condition, cognitive function, sexual satisfaction, daily activities, emotional wellbeing, and family and social life[10]. These patients may feel embarrassed, anguished, and stressed due to UI, and experience impaired self-confidence and fear that other people will notice it[11].

Despite its high prevalence and negative impact on quality of life[3], the public health system still has no specialized services to provide care to these women, and the PFRP is a pioneering initiative. However, some factors may influence the low number of participants in the program, such as embarrassment and belief that UI is part of the aging process, among others. In addition, care is provided once a week to up to four patients per day, with each patient having a follow-up of 12 weeks or more, which limits the capacity for care.

In the present study, nocturnal enuresis affected four KHQ domains: Role limitations; Physical limitations and Emotions; and Severity measures, as observed in a previous study[12], in which women with nocturnal enuresis presented worse QoL. UUI affected the domains of Incontinence impact and Role limitations. MUI affected the same domains and Severity measures. Because MUI is a situation of both SUI and UUI, the results were expected to be similar to those found for UUI cases which, due to the unpredictability of urine release episodes, may cause greater embarrassment. In addition, the loss of urine in stress situations can explain the greater number of domains affected when compared to the UUI. In MUI, as it involves UUI, its impact on the QoL of these women may be particularly important, because UUI increases with age and becomes the most prevalent type among elderly women[1]. These findings are similar to those obtained in a study conducted with Spanish women[13], in which the HRQoL dimensions related to daily activities (work, study, and household activities, among others) and self-care (bathing and dressing) were worse in the UI women.

SUI did not affect any KHQ domain, in agreement with a previous study[14] in which women with medium to moderate urine release presented higher scores in QoL assessment questionnaires, and the less severe the urine release symptoms, the greater their sexual satisfaction. In addition, women with SUI, when compared to those with UUI, did not present significantly affected QoL, also in agreement with this study.

A study conducted in Turkey[9] showed similar results, except for SUI, probably because the women were elderly, with a mean age of 77 years. In this sense, it is known that the alterations due to aging in the urethral support are more prominent and increase the susceptibility to this type of UI. Women without SUI presented better QoL, as did women without UUI or MUI[9].

Coital incontinence can lead to disharmony between the couple and affect sexual activity, as a result of embarrassment, shame, and low self-esteem, affecting the QoL[14-15]. In fact, although women with coital incontinence did not present impact on the QoL, when evaluated by the KHQ, the variable of "changes in sexual activity" affected six KHQ domains and the Severity measures. Although more than half of the women with an active sexual life considered it good or optimal, approximately 46% considered it ordinary or very bad, which was consistent with a study conducted in Brazil, in which difficulty reaching orgasm, lack of sexual desire, and dyspareunia were more common in UI women[14]. Likewise, another study with Brazilian women seen in urogynecology clinics found that more than 64% of sexually active patients had sexual dysfunction. Most of them were married (73%), non-hypertensive (73.8%), or diabetic (91.5%)[16]—a similar profile to the one found in this study.

Among sexually active women analyzed by Karbage et al.[16], 48.3% reported coital incontinence: 68.3% with penetration; 27% with orgasm; and 4.7% in both situations. In addition, 58% reported that fear of urinary release sometimes, usually, or always interfered negatively in sexual intercourse. Women with coital incontinence had worse sexual function than those without. Coital incontinence was associated with low sexual desire and infrequent orgasm, and its prevalence was 45%. In this study, the prevalence of coital incontinence was similar: 38%.

Changes in sexual activity due to UI affected KHQ six domains and Severity measures, increasing their scores, which indicates worse QoL, as UI women feel embarrassed, insecure, and frustrated[16]. Although urine release during sexual intercourse did not affect the KHQ domains, unlike in another study[17], changes in sexual activity are an aspect that should be investigated during care provision to UI patients. In addition, wellbeing is lower in women who report UI and decreases as UI severity increases, leading to reduced HRQoL[18]. The impact of UI on sexual activity may be associated not only with the urine release itself, but also with psychological insecurity and self-image worsening due to embarrassment, which may be more frequent in patients with severe UI[19].

This study confirms the positive correlation of ICIQ-SF with almost all KHQ domains, except for Personal relationships and General health perception. A study conducted by Tamanini et al.[7] that validated the ICIQ-SF construct using the KHQ also observed a moderate association between the results obtained with the two instruments, perhaps due to differences between them. The KHQ evaluates "bladder disorders"; that is, it includes other lower urinary tract symptoms in addition to UI and has scales of different scoring systems with more items[7].

The findings obtained in this study are consistent with the results of other studies, although they were conducted using different questionnaires, and show a negative impact of UI on several dimensions of the lives of these women. A cross-sectional study[20] observed a strong negative association in the dimensions of QoL related to energy, social isolation, and physical mobility. The fact that it affects energy suggests that UI is a chronic disease, which affects daily life in different moments, and could explain the perception of fatigue that contributes to the fact that UI patients do not seek care[20].

Social isolation may be associated with UI due to problems such as odor, frequent change of protection, and consequent refusal to visit public places, which probably limits contact with other people. Physical activity may be affected due to frequent bathroom visits and risk of urine release during the practice. The KHQ dimension of Personal relationships may be related to aspects of family and sexual life[21]. The impact of UI on social life reduces the number of times these patients visit public places, travel, sleep in places other than their own homes, and visit friends due to the urine odor and the possibility of not having proper place for urination and personal hygiene[10,14]. In a previous study[14], QoL measured by KHQ showed higher scores in domains of Incontinence impact (57.14) and Severity Measures (45.71), and similar results were found when comparing different types of UI and KHQ domains.

The sociodemographic variables were analyzed only in relation to the KHQ domains, because it is the most comprehensive and specific HRQoL for urinary disorders[21]. Weak correlations were observed between some domains and the variables of age and weight. Negative correlations between age and the domains of Social limitations and Sleep/energy may indicate that UI affects young people more frequently, because they are more socially active and UI is culturally considered an inherent phenomenon of aging[3], but it is an assumption that still needs to be confirmed.

Although this study did not present the results related to the provision of care in the PFRP - as it was not an objective of this study - analysis of collected data shows such data are relevant to care planning and evaluation. Indeed, Nystrom et al.[22] showed that validated instruments are able to measure clinically relevant UI improvements when the evaluation is performed at the beginning and the end of the treatment.

Study limitations

Although the results of this study show associations, they need to be investigated in longitudinal studies. Multiple analyses and small sample size did not allow the exclusion of women with more than one type of UI for separate analyses according to the type of UI. In addition, validated questionnaires for sexual activity assessment were not used.

Contributions to nursing, health care, and public policy areas

The profile of women participating in the PFRP is similar to that of other studies and the results are consistent with those of other research, allowing them to be partially generalized[9,12-16,20].

The QoL evaluation of women with UI using validated questionnaires is important for nursing care planning and evaluation, because it measures clinically relevant improvements in patients with UI. As the two questionnaires have correlations, the health center may use whichever is the most suitable to its service. Proper treatment, in turn, can reduce the negative impact of UI on the HRQoL of these women, optimize healthcare resources, and promote public policies to minimize such a prevalent condition.

CONCLUSION

According to the profile of the women from the PFRP they are, mostly or on average, around 55 years of age; married; white; with SUI, UUI, or MUI; and present moderate to large urine release,

daily and diurnal. Also, most of them do not have the chronic diseases that are prevalent in the general population, although almost half of them report SAH. Only 50.5% have an active sex life and most of them have sexual complaints. Changes in sexual activity is the variable that affected the highest number of QoL domains evaluated through the KHQ.

A correlation was observed between virtually all KHQ domains and ICIQ-SF scores, except for the domain of Personal relationships, confirming the findings of previous studies. Considering the above, HRQoL questionnaires are recommended when evaluating this issue, at the beginning and at the end of the treatment, to measure the results.

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