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Importance of domestic guidelines for women with urinary incontinence

Importância das orientações domiciliares para mulheres com incontinência urinária

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Abstract

Introduction: The importance of domestic guidelines as a help in the treatment of urinary incontinence (UI) is evident, but its influence on the quality of life (QoL) of incontinent women, when applied without supervision, is unknown. **Objective**: To evaluate the influence of domestic guidelines for the treatment of UI on the QoL of incontinent women. **Methods**: This is a quasi-experimental before and after study. Seventy one women with UI and a mean age of 53.47 (± 14.21) years were assessed, instructed with the aid of an illustrative and explanatory folder and reassessed after six months using the King's Health Questionnaire (KHQ). KHQ data were analyzed using the Wilcoxon test for paired samples, with significance level of 5%. **Results**: There was a statistically proven improvement in six of the eight domains and in six of the ten symptoms assessed ($p < 0.05$). **Conclusion**: We conclude that the domestic guidelines for treatment of UI positively influenced the QoL of the women who participated in this study.

Keywords: Urinary incontinence. Quality of life. Physical therapy. Women's health.

Resumo

Introdução*: A importância das orientações domiciliares como coadjuvantes no tratamento da incontinência urinária (IU) é evidente, mas não se sabe qual sua influência sobre a qualidade de vida (QV) de mulheres incontinentes quando aplicadas sem supervisão.* ***Objetivos****: Avaliar a influência das orientações domiciliares para tratamento da IU sobre a QV de mulheres incontinentes.* ***Métodos****: Estudo quase-experimental do tipo antes e depois. Foram incluídas 71 mulheres com IU, 53,47 (± 14,21) anos orientadas com auxílio de um folder ilustrativo e explicativo e reavaliadas após seis meses com auxílio do* King's Health Questionnaire *(KHQ). Os dados do KHQ foram analisados pelo teste de Wilcoxon para amostras pareadas, com nível de significância de 5%.* ***Resultados****: Houve melhora estatisticamente comprovada em seis dos oito domínios e em seis dos dez sintomas avaliados (p < 0,05).* ***Conclusão****: Concluímos que as orientações domiciliares para tratamento da IU influenciaram positivamente a QV das mulheres no grupo estudado.*

Palavras-chave*: Incontinência urinária. Qualidade de vida. Fisioterapia. Saúde da mulher.*

Introduction

Urinary incontinence (UI) is defined by the International Continence Society (ICS) as the involuntary leakage of urine, which may cause social and hygiene problems (1). Age, sex, as well as physical, mental and general health conditions directly influence the prevalence and incidence of UI (2). In Brazil, prevalence studies focus on specific populations (2, 3, 4, 5). Up to now, there is no significant study assessing UI prevalence in population-based surveys and thus enabling the analysis of incidence rates in the national population. However, several authors have indicated a substantial number of incontinent women at various stages of the life cycle (6, 7, 8, 9, 10).

People who have urine leakage may present many symptoms, including stress urinary incontinence (SUI), urgency urinary incontinence (UUI), mixed urinary incontinence (MUI) or urinary incontinence while changing posture, during sexual intercourse, among others (1). This diversity of symptoms together with the level of activity and sociocultural integration of these women are factors directly related to the impact of UI on their quality of life (QoL) (11).

The diagnosis of UI is based on clinical history, physical examination and urodynamic study. Voiding diary, pad test and QoL questionnaires complement the diagnosis (12). The ICS recommends the use of specific tools such as the King's Health Questionnaire (KHQ) to quantify the influence of UI on QoL as well as to quantify the effects of therapy (1).

The therapeutic approach consists of surgical and conservative treatment. It is chosen based on the severity and etiology of the UI. There are several surgical techniques available. However, like any surgery, they carry risks, increase spending and not always avoid the association with other treatments (13). Conservative treatment is based on pharmacological and physical therapy resources (14). The effectiveness of the first is limited to some cases and it has considerable side effects. Because it has low cost and virtually no side effects, the latter should be the first choice of treatment or it should be indicated in combination with pharmacological treatment (15, 16).

Several studies indicate the effectiveness of pelvic floor training (PFT), which is widely used in physical therapy (17, 18, 19). The effectiveness of this training, its low cost of implementation and the fact that it has virtually no side effects turned it into a strategy for the treatment of UI in health care programs conducted at Basic Healthcare Units. These programs are often carried out with the aid of booklets and lessons. Satisfactory results are observed even among populations who are not effectively engaged with treatment, either because they refuse to accept the problem, are illiterate or low-income (18).

The aim of this study was to evaluate the influence of domestic guidelines for the treatment of UI on the QoL of incontinent women.

Methods

This quasi-experimental before and after study was approved by the Research Ethics Committee of the Federal University of Triangulo Mineiro under protocol

number 1619. It was conducted from April 2010 to August 2011 at the Basic Healthcare Units, the Center for Integral Attention to Women's Health (CAISM) and the Maria da Glória Outpatient Clinic (UFTM).

Women with UI were identified during lectures on the prevention and treatment of UI and held at facilities of the public healthcare network. All women with urinary incontinence complaints who had not had or were in physical therapy and accepted to participate were included in this study. Exclusion criteria were: age below 18 years, pregnancy, report of neurological alterations, and cognitive deficits that could compromise the study. All participants read and signed the informed consent form.

In the initial approach, we collected personal and sociodemographic data, gynecological, obstetric and sexual history, and characteristics and data related to UI, associated diseases and lifestyle habits. At this moment and about six months later, we applied the KHQ, which is composed of 32 questions. Eleven of these questions constitute a scale of symptoms: urinary frequency, nocturia, urinary urgency, urge incontinence, stress urinary incontinence, nocturnal enuresis, UI during sexual intercourse, frequent urinary tract infections, bladder pain, difficulty urinating, as well as a space to mention other symptoms related to UI. The remainder are divided into eight domains, which are: general health perception, impact of UI, limitations of daily activities, physical and social limitations, personal relationships, emotion, sleep/energy and severity/coping measures. The (numeric) values of each question are summed or calculated by mathematical formula and result in values between zero and 100 for each domain. The higher the score, the worse the perception of QoL. The KHQ was applied in the form of interview because there were semi-illiterate and illiterate women in the sample.

Women, individually, were provided general guidance about UI (definition, types of UI and aggravating factors), prevention and treatment modalities. With the aid of an explanatory folder (available at: http://www.uftm.edu.br/upload/noticias/IU_versao_9.pdf), women received the following instructions: anatomy and functions of the pelvic floor; and exercises for the activation of the pelvic floor muscles. The exercises consisted of sustained submaximal contractions and unsustained maximal contractions. Initially, three sets of ten repetitions should be performed three times a day in the supine, sitting and standing positions. The women received only verbal guidance. There was no prior physical examination of the pelvic floor.

The women were instructed to perform these exercises on a daily basis, increasing the time of sustained submaximal contractions and the number of series according to their evolution. However, they should be careful not to compromise quality while "increasing quantity".

The scores for the domains and symptoms of the QoL assessment were compared using the Wilcoxon test for paired samples, with significance level of 0.05. Average, standard deviation, and absolute and relative frequencies were evaluated.

Results

71 women with urinary leakage complaints were evaluated and re-evaluated. The average age of participants was 53.47 ± 14.21 years. Their socio-demographic and obstetric data are shown in Table 1.

Data regarding the symptoms score before and after guidance was provided are shown in Figure 1. Among the symptoms that most affected women before guidance are: urinary urgency (57.75%), urge incontinence (52.11%), and stress urinary incontinence (SUI, 52.11%). After guidance, those symptoms that most bothered these women were: urge incontinence (35.21%), urinary urgency (32.39%) and increased urinary frequency (26.76%). Significant improvements were observed in six of the ten evaluated symptoms (urinary frequency, nocturia, urinary urgency, urge incontinence, stress urinary incontinence and nocturnal enuresis) ($p < 0.05$).

Table 2 shows the QoL scores before and after guidance was provided, with significant improvement in six of eight domains (impact of incontinence, limitations of daily activities, physical and social limitations, emotions, sleep/energy and severity/coping measures) ($p < 0.05$).

Discussion

The average age of participants (53.47 years) was similar to that found in other studies conducted with women with UI (20, 21). This age probably predominates among women with UI due to the physiological changes related to aging and the postmenopausal period, such as hormonal decline and decrease in muscle tone, which are important predisposing factors to urinary leakage (10), (22, 23).

Table 1 - Socio-demographic and obstetric characteristics of women with UI

(To be continued)

Variables	Average (n = 71)	Standard deviation
Age (years)	53.48	14.21
BMI (kg/m^2)	28.38	5.26
Marital status	**Absolut frequency (n)**	**Relative frequency (%)**
Married	36	50.70
Single	12	16.90
Widow	12	16.90
Divorced	11	15.49
Education level	**Absolut frequency (n)**	**Relative frequency (%)**
Complete primary education	41	57.74
Incomplete primary education	7	9.85
Complete secondary education	15	21.12
Incomplete secondary education	3	4.22
Incomplete higher education	1	1.40
Semi-illiteracy	1	1.40
Illiteracy	3	4.22
Monthly income	**Absolut frequency (n)**	**Relative frequency (%)**
≤ 2 minimum wages	42	59.15
2 to 4 minimum wages	19	26.76
4 to 10 minimum wages	9	12.67
> 10 minimum wages	1	1.40
Parity	**Absolut frequency (n)**	**Relative frequency (%)**
Nulliparous	1	1.40
1 to 3 deliveries	41	57.74
≥ 4 deliveries	29	40.84
Vaginal deliveries	**Absolut frequency (n)**	**Relative frequency (%)**
0	12	16.90
1 to 2	27	38.02
≥ 3	30	42.25
Not reported	2	2.81
Cesarean deliveries	**Absolut frequency (n)**	**Relative frequency (%)**
0	35	49.29
1 to 2	29	40.84

Table 1 - Socio-demographic and obstetric characteristics of women with UI

(Conclusion)

Cesarean deliveries	Absolut frequency (n)	Relative frequency (%)
≥ 3	5	7.04
Not reported	2	2.81

Source: Research data.

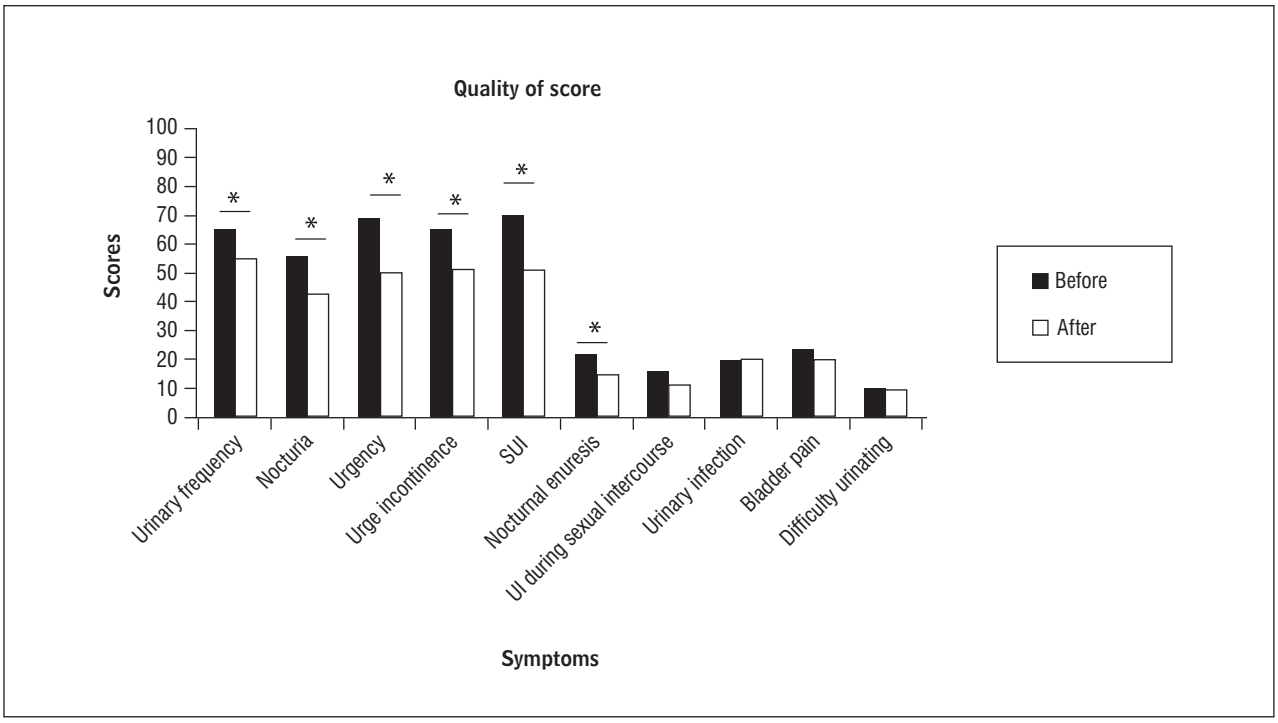

Figure 1 - Symptoms scores before and after guidance

Source: Research data.

Table 2 - Variations of the domains before and after guidance

(To be continued)

KHQ domains	Before	After	p*
	Average ± Standard deviation		
General health perception	40.14 ± 20.04	35.56 ± 24.52	0.1073
Impact of incontinence	57.03 ± 35.32	43.90 ± 36.38	0.0079*
Limitations of daily activities	39.39 ± 35.42	25.17 ± 33.40	0.0008*
Physical and social limitations	32.49 ± 32.64	19.17 ± 27.53	< 0.0001*
Personal relationships	15.25 ± 29.33	13.34 ± 27.80	0.5115
Emotions	41.63 ± 35.18	32.03 ± 34.47	0.0461*
Sleep/energy	38.93 ± 30.38	28.75 ± 26.54	0.0030*

Table 2 - Variations of the domains before and after guidance

(Conclusion)

KHQ domains	Before	After	p*
	Average ± Standard deviation		
Severity/coping measures	46.65 ± 28.63	33.73 ± 25.30	< 0.0001*

Note: * p < 5% (Wilcoxon test).
Source: Research data.

Knorst et al. (20) and Figueiredo et al. (21) reported results similar to ours, regarding the education level of women with UI. Most women (67.59%) were found to have complete or incomplete primary education. However, we cannot say that there is a correlation between educational level and incidence of UI. We believe that the low educational level found is due to the target audience of these studies, which were composed by public health service users.

Data on monthly income are not always presented together with factors influencing UI (20, 21). In the study by Sacomori et al. (24) the average income per family member was 1.25 minimum wages. We believe that the fact that most women have a monthly income lower or equal to 2 minimal wages is compatible with public health service users.

Although socioeconomic data such as educational level and monthly income are reported in some studies (20, 21), (24), no correlation between these data and the incidence or severity of UI was mentioned.

Most women in UI studies are married (20, 21), (24). This may cause the UI to have a greater impact on the lives of women who maintain stable relationships and have an active sex life, since the leakage of urine and its associated smell can generate embarrassment (11).

In our study, the mean body mass index (BMI) was indicative of overweight, and the average number of pregnancies per woman (four pregnancies) are close to the results of Amaro et al. (25). The latter analyzed the prevalence of and risk factors for UI, and found higher BMI in a group of incontinent women, when compared to a group of women without urinary leakage who had an average of 3.6 pregnancies. Thus, we found several associated risk factors for the development of UI in the group evaluated.

In this study, we observed a significant improvement in most domains and symptoms after guidance was provided. This improvement was also evidenced in the study by Rett et al. (26), in which 26 women with predominant clinical complaints of SUI were treated during 12 sessions of kinesiotherapy and electromyographic biofeedback. Although most domains have shown improvements, the personal relationships domain showed no change after the intervention. This also occurred in our study: we observed no change in this domain after guidance was provided, which diverges somewhat from the literature.

Since this domain involves aspects of family and sexual life, it is likely that the intensity of urinary leakage was not enough to affect family relationships and sex life, or yet, which in our study is more likely to be the case due to the average age of the studied women, some of these women probably did not have an active sex life anymore. This can be observed in the scale of urinary symptoms, in which only 18 (25%) of 71 evaluated women reported some level of urinary incontinence during intercourse before guidance was provided.

The KHQ is the most used tool to measure the influence of both surgical and therapeutic approaches on the QoL of women with UI (26, 27, 28).

In the therapeutic approach to UI, pelvic floor muscles training has been the resource of first choice because it has low cost, no contraindications and achieves good results (29, 30). This training is based on raising awareness, automation and exercises for fast-contraction fibers, which treat SUI, and for slow-contraction fibers, which prevent urge incontinence (31).

The exercises taught in this study contemplated these concepts, since they were designed to meet the needs of a group of incontinent women without a specific diagnosis as to the type of UI. During the guidance sessions, one of our goals was to raise the awareness to the pelvic floor, using pictures that helped explain anatomical and functional features

of this region, as recommended by several authors (31, 32, 33).

The exercises performed associated physical postures, breathing and movements of the lower limbs with the contraction of the pelvic floor. These contractions followed the principle that the most effective training occurs when fast contractions are performed with maximum intensity and sustained contractions are carried out with submaximal intensity. They can reach a subjective improvement between 56 and 70% (29).

Despite the positive results obtained in our study, the failure to adopt a methodology to classify the type of UI and to establish the percentage, even if subjective, of functional improvement of the pelvic floor was considered to be a limitation. Studies conducted at public healthcare network facilities often have this limitation. This is the case of the study by Sacomori et al. (24), in which the presence of UI was determined by self-report through a questionnaire and UI was not classified, as it occurred in this study.

According to Santos and Simões (34), measuring and assessing the QoL of an individual or a population is hard work. Accurately and effectively interfering also seems to be complicated. However, there is an ever-growing concern about the QoL of the population, as recommended by the World Health Organization (2). Therefore, studies that take into account the assessment of QoL should be valued.

In the case of UI, we know that the influence on QoL depends on the activity level of sociocultural integration and age. Even though the impact of UI on QoL is large, it is still considered by some women and healthcare professionals as an inevitable result of aging in women. Therefore, this topic deserves to be treated as a public health issue (10), (35).

Sacomori et al. (24) identified a high prevalence of UI in women seeking to undergo screening test for cervical cancer in public healthcare facilities. This fact justifies the conduction of preventive approaches in these settings. In this context, we consider our study to be extremely important, because it achieved improvements in the QoL of incontinent women from public health facilities through simple preventive and health promotion measures.

In literature there are many reports of the positive impact of pelvic floor muscles strengthening on the QoL of incontinent women, and the provision of domestic guidelines are part of this approach. However, in accordance with our best knowledge, no reports were found on its real benefits when performed without supervision and association with physical therapy.

Even though 100% compliance on the part of the volunteers is often not achieved, as occurs in most unsupervised domestic guidelines (18), we believe, based on the findings of our study, that this guidance can have a positive impact on the QoL of women with UI.

Initiatives to promote the discussion of this topic, as well as the possibility of home management of UI, as in this study, should be performed and improved in order to become additional resources for coping with UI.

Conclusion

We conclude that providing domestic guidelines for treating UI positively influenced the UI domains (impact of incontinence, limitations of daily activities, physical and social limitations, emotions, sleep/energy, and severity/coping measures) and symptoms (urinary frequency, nocturia, urgency, urge incontinence , SUI and nocturnal enuresis), improving the QoL of the women who participated in this study.

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