

KNOWLEDGE ABOUT URINARY INCONTINENCE IN TWO GROUPS OF WOMEN FROM DIFFERENT SOCIO-ECONOMIC LEVELS

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Abstract

Purpose: To evaluate the level of knowledge about urinary incontinence among women from different socioeconomic status attending private and public institutions, as well as the prevalence of urinary incontinence and the search for treatment by these women. **Methods:** A cross-sectional study, applying a Quiz questionnaire to 197 women where 93 were from public ambulatory service and 104 from private clinics. Age, marital status, family income, education, personal background, presence or absence of urine loss and their characteristics, search for treatment were also assessed. All interviewed women answered the Quiz Questionnaire assessing the degree of knowledge about urinary incontinence. For statistical analysis we used SPSS (Statistical Package for Social Sciences) version 15.0, by applying the Chi-square test for categorical variables and t-Student test for independent samples. **Results:** Most women in both groups answered correctly nine of 14 affirmative of the Quiz questionnaire. Only three of the statements showed significant differences in answers between the groups ($p=0,004$, $p=0,04$ and $p=0,01$). The prevalence of urinary incontinence was higher in public ambulatory group (26,9%) than in private clinics group (14,4%) ($p=0,03$). From 25 women with urinary incontinence in public ambulatory, 52% sought treatment, and among the 15 women with urinary incontinence in private clinics, 60% sought treatment ($p=0,7$). **Conclusion:** There was no difference in the level of knowledge about urinary incontinence among the groups. Both groups showed high levels of knowledge about urinary incontinence. There was higher prevalence in the public ambulatory group, and equal prevalence of search for treatment between the two groups.

Keywords: Urinary Incontinence; Social Class; Socioeconomic Factors

Resumo

Objetivo: Avaliar o nível de conhecimento sobre incontinência urinária entre mulheres de diferentes níveis socioeconômicos frequentadoras de instituições privadas e públicas, bem como a prevalência de incontinência urinária e a busca por tratamento entre essas mulheres. **Métodos:** Estudo transversal, realizado com 197 mulheres, sendo 93 provenientes do serviço público e 104 do setor privado. Avaliou-se idade, estado civil, renda familiar, escolaridade, antecedentes pessoais, presença ou não de perda de urina e suas características e busca por tratamento; e todas as mulheres responderam ao Questionário Quiz que avalia grau de conhecimento sobre a incontinência urinária. Para análise estatística utilizou-se o programa SPSS (Statistical Package for Social Sciences) versão 15.0, aplicando-se o teste Qui-quadrado para variáveis categóricas e o t de Student para amostras independentes. **Resultados:** A maioria das mulheres dos dois grupos acertou nove das 14 afirmativas do Questionário Quiz. Apenas três das afirmativas tiveram diferença significativa nas respostas entre os grupos ($p=0,004$, $p=0,04$ e $p=0,01$). A prevalência de incontinência urinária foi maior no grupo do setor público (26,9%) que no do setor privado (14,4%) ($p=0,03$). Das 25 mulheres com incontinência urinária do setor público, 52% buscaram tratamento, e entre as 15 mulheres com incontinência urinária no setor privado, 60% buscaram tratamento ($p=0,7$). **Conclusões:** Não se observou diferenças no nível de conhecimento sobre incontinência urinária entre os grupos. Os dois grupos apresentaram elevado nível de conhecimento sobre incontinência urinária. Observou-se maior prevalência no grupo do setor público, e similar frequência de busca por tratamento entre os dois grupos.

Palavras-chave: Incontinência Urinária; Conhecimento; Classe Social; Fatores Socioeconômicos

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INTRODUCTION

Urinary incontinence, according to the International Continence Society (ICS) is defined as any involuntary loss of urine¹. Stress urinary incontinence is the involuntary loss of urine synchronic to the effort as sneezing or coughing, urgent incontinence is the involuntary loss of urine associated with or immediately preceded by voiding urgency and mixed urinary incontinence is the involuntary loss of urine associated with urgency and also with the effort¹.

Urinary incontinence is a condition that affects millions of people of all ages and both genders, especially women in menopause and post-menopause². Its prevalence varies according to age and population observed^{3,4,5,6}. It is estimated that around 17 million U.S. women have some type of urinary incontinence⁶. It is considered that one in four women aged between 30 and 59 years have experienced an episode of incontinence³. Prevalence rates of involuntary loss of urine are between 8 and 58% in the general adult female population^{6,7,8}. In a study performed in Norway in women over 20 years of age, the prevalence of urinary incontinence was 25%, and in women between 80 and 89 years this percentage was 46%². Data relating to population, although still incipient point prevalence of urinary incontinence among women with 26.2% and 43%^{5,9,10,11}.

The investigation of patients with urinary incontinence begins with history and gynecological examination, which should reproduce and characterize the urinary loss^{8,12}. One in nine women may be unnecessarily operated when the diagnosis is based only on clinical propaedeutic⁸. Thus, the exams should always be part of the evaluation of diagnosis⁸. The analysis of urinary sediment and urine culture are mandatory, since urinary tract infection may be the cause of the symptoms, as well as urodynamic studies, which by analysis of abdominal pressure, bladder and urethral in the phases of filling and emptying of the bladder, allows more precise and objective characterization of the urinary disorder, being also useful for guiding treatment and monitoring of patients^{6,8,12}.

Risk factors related to urinary incontinence include age, parity, menopausal status, use of medications and some comorbidities (diabetes mellitus, stroke, obesity)^{2,5,6,13,14,15}.

Treatment will depend on the type and causes of urinary incontinence. It can be behavioral, pharmacological, physiotherapy or surgical^{6,12,15,16,17}.

In Brazil, there are few studies on the prevalence of urinary incontinence, risk factors, level of knowledge of women about incontinence and percentage of women seeking medical attention complaining of urine loss^{10,18}. Ho-

wever, in recent years, several studies have assessed the quality of life of incontinent women. When compared to continent women, those with urinary incontinence have poor quality of life with negative impact on sexual, social and professional aspects^{4,7,19,20,21}.

The percentage of women seeking medical attention complaining about urine loss and the percentage of those who have urine leakage regularly or sporadically have shown divergent^{10,22}. Rates of demand for medical care found in different studies are 4%, 6%, 11% and 14%^{7,22}. Many women with mild and moderate incontinence do not seek medical care because they believe that urinary incontinence is a normal process and result from aging process^{7,23}. Other common reasons for not seeking treatment is the fact that incontinent women are embarrassed in talking about their problem, low expectations on the benefits of treatment and lack of knowledge of where to seek such treatment^{7,23}.

From this point of view, we became interested in assessing the level of knowledge about urinary incontinence in both groups of women of different socioeconomic levels, one constituted by attending private clinics and another consisting patients enrolled in outpatient public service, as well as the prevalence of urinary incontinence and seeking for treatment in both groups.

METHODS

Cross-sectional study was performed at the Clinic of Gynecology, University Hospital, Federal University of Sergipe (HU-UFS) and two private clinics with care in the field of gynecology and obstetrics of the city of Aracaju, state of Sergipe, after project approved by the Research Ethics Committee for Human Research of the Institutions.

We included 197 women over age 40, waiting for care in the period from March to May 2009, and 93 from the HU-UFS (Public Sector), and 104 private clinics (Private Sector). All signed a written informed consent after being informed about the purpose of research.

A questionnaire consisting of two parts. Initially, it was reviewed sociodemographic data (age, race, education, marital status, family income), personal history, gynecological and obstetric as number of pregnancies, parity, menopausal status, presence of comorbidities, previous gynecological surgeries, presence of involuntary urine and treatment seeking. Then the women were asked to answer the Quiz on Urinary Incontinence developed by Branch et al²⁴ based on the recommendations of the AHCP (Agency for Health Care Policy and Research) and the experience of the authors in the management of patients with urinary incontinence, which consists of 14

statements about urinary incontinence that participants could answer “agree”, “disagree” and “do not know”. Six of the 14 statements were true, and should be answered with “agree” and 8 were false and should be answered with “disagree”.

The statements are grouped into four categories: treatment and effects of urinary incontinence, and three were true (Statements 4,5,6) and three were false (Statements 11,13, 14); causes of urinary incontinence with three true (Statements 3,8,10) and a false (Statement 12), the relationship between age and urinary incontinence with two false statements (Statements 1 and 2) and doctor-patient discussion about urinary incontinence, also with two false statements (Statements 7 and 9).

After collecting the information, the data were stored in spreadsheets using Microsoft Office ExcelR, version 2007 for WindowsR. Statistical calculations were performed by using SPSS (Statistical Package for Social Sciences) version 15.0.

Numerical variables were described as mean and standard deviation. As for categorical variables simple and relative frequencies were used for summarizing them and confidence interval for 95% where applicable. We used the Shapiro-Wilk test for assessing the assumption of normality. For the relative hypotheses test concerning categorical variables we used the chi-square test or Fisher’s exact test when appropriate.

The comparison between groups (public sector and private sector) was performed using Student’s t test for independent samples. The confidence level was 0.05 for α error and 0.80 power and tests were assumed as two-tailed tests.

RESULTS

There was no significant difference between the mean age of patients in groups (Public Sector: 52.8, private sector: 51.6, $p=0.3$) (Table 1).

In relation to marital status, there was a higher prevalence of women with partners in the private sector (76.6%) than in the public sector 59% ($p=0.01$) (Table 1).

There was a significant difference ($p < 0.0001$) in the level of education between the two groups, registering a higher prevalence of illiterate (16.1%) and women with a high school education (16.1%) and fundamental (62.4%) in the public sector. In the private sector, there was a higher prevalence of secondary education (29.8%) and graduation (41.3%) (Table 1).

Income distribution also differed significantly ($p < 0.0001$) between the public and private sectors and we observed a higher prevalence of women with incomes less

than one minimum wage (39.8%) and between 1 and 3 minimum wages (53.8%) in the public sector, and higher wages than three minimum wages (80.7%) in the private sector (Table 1).

Table 1 - Socio-demographic characteristics of women attending public sector and private sector.

Sociodemographic characteristics	Public Sector n=93 (47,2%)	Private sector n=104 (52,8%)	P
Age (years) ¹	52,8 +/- 8,9	51,6 +/- 8,9	0,3
Race ²	30 (32,3%)	59 (56,7%)	0,02
White	26 (28%)	16 (15,4%)	
Black	37 (39,8%)	29 (27,9%)	
Mixed			
Marital status ²	49 (59%)	72 (76,6%)	0,01
With partner	34 (41%)	22 (23,4%)	
No partner			
Schooling ³	15 (16,1%)	0 (0%)	0,000001
Illiterate	58 (62,4%)	30 (28,8%)	
Elementary school	15 (16,1%)	31 (29,8%)	
High school	5 (5,4%)	43 (41,3%)	
Graduation			
Family income (minimum wage) ³	37 (39,8%)	3 (2,9%)	0,000001
Less than 1	50 (53,8%)	17 (16,3%)	
1,1-3	6 (6,5%)	30 (28,8%)	
3,1-6	0 (%)	26 (25%)	
6,1-10	0 (0%)	28 (26,9%)	
Over 10			
Number of persons at home ²	17 (18,3%)	22 (21,2%)	0,4
1-2	45 (48,4%)	56 (53,8%)	
3-4	31 (33,3%)	26 (25%)	
More than 4			

With regard to personal, gynecological and obstetric history there was significant difference ($p=0.05$) in the number of pregnancies between the two groups. In the public sector, 51.6 % had between 3 and 6 children, while in the private sector, 49 % had 0-2 children. There was no difference in the amount of normal deliveries between the two groups ($p=0.05$). In the public sector, 46.3% had three or more normal births, whereas in the private sector this percentage was 31.7%. The prevalence of having at least one cesarean section was 28% in the public sector and 39.4% in the private sector ($p=0.09$) (Table 2).

There was no significant difference in menopausal status among women in the two groups, 52.7 % of the public sector and 47.1 % of the private sector were postmenopausal ($p=0.4$) (Table 2).

History of pelvic surgery was reported by 73.1% of women in the public sector and 74% of women in the private sector ($p=0.8$) (Table 2).

Urinary incontinence was reported by 20.3% of participants, with a higher occurrence of episodes of urine loss among women in the public sector (26.9%) than among women in the private sector (14.4%) ($p=0.03$) (Table 2).

Table 2 - Personal, gynecological and obstetric characteristics of women attending public sector and the private sector.

Personal, gynecological and obstetric characteristics	Public Sector n=93 (47,2%)	Private Sector n=104 (52,8%)	P
Pregnancies	31 (33,3%)	51 (49%)	0,05
0-2	48 (51,6%)	45 (43,3%)	
3-6	14 (15,1%)	8 (7,7%)	
More than 6			
Normal deliveries	50 (53,8%)	71 (68,3%)	0,05
0-2	33 (35,5%)	29 (27,9%)	
3-6	10 (10,8%)	4 (3,8%)	
More than 6			
Cesarean	67 (72%)	63 (60,6%)	0,1
Normal	15 (16,1%)	17 (16,3%)	
One cesarean	11 (11,8%)	24 (23,1%)	
More than one cesarean			
Menopausal status	44 (47,3%)	55 (52,9%)	0,4
Premenopausal status	49 (52,7%)	49 (47,1%)	
Postmenopausal status			
Comorbidities	62 (66,7%)	41 (39,4%)	0,0001
Yes	31 (33,3%)	63 (60,6%)	
No			
Prior gynecologic Surgery	68 (73,1%)	77 (74%)	0,8
Yes	25 (26,9%)	27 (26%)	
No			
Involuntary loss of urine	25 (26,9%)	15 (14,4%)	0,03
Yes	68 (73,1%)	89 (85,6%)	
No			

When asked about the time of urine loss, 37.5 % reported lose urine less than one year. Of incontinent women, 55 % stated they had sought medical care. Among the 25 women with urinary incontinence in the public sector, 13 (52%) sought treatment for urinary incontinence, and in the private sector, of 15 women with urinary incontinence, 9 (60%) sought treatment (p=0.7).

Nine of the 14 statements in the Quiz on urinary incontinence were answered correctly by more than half of the women interviewed in the two groups (Table 3).

Table 3 - Results of the Quiz on Urinary Incontinence.

True statements	AGREE		DISAGREE		NOT KNOW	
	Public Sector n=93 (47,2%)	Private Sector n=104 (52,8%)	Public Sector n=93 (47,2%)	Private Sector n=104 (52,8%)	Public Sector n=93 (47,2%)	Private Sector n=104 (52,8%)
QQI3	50 (53,8)	46 (44,2)	32 (34,4)	35 (33,7)	11 (11,8)	23 (22,1)
QQI6	29 (31,2)	31 (29,8)	63 (67,7)	73 (70,2)	1 (1,1)	0 (0)
QQI8	70 (75,3)	81 (77,9)	19 (20,4)	21 (20,2)	4 (4,3)	2 (1,9)
QQI11	87 (93,5)	97 (93,3)	4 (4,3)	6 (5,8)	2 (2,2)	1 (1)
QQI14	48 (51,6)	70 (67,3)	35 (37,6)	19 (18,3)	10 (10,8)	15 (14,4)
False statements						
QQI1	26 (28)	33 (31,7)	64 (68,8)	62 (64,4)	3 (3,2)	4 (3,8)
QQI2	50 (53,8)	69 (66,3)	36 (38,7)	30 (28,8)	7 (7,5)	5 (4,8)
QQI4	14 (15,1)	9 (8,7)	73 (78,5)	89 (85,6)	6 (6,5)	6 (5,8)
QQI5	15 (16,1)	8 (7,7)	77 (82,8)	93 (89,4)	1 (1,1)	3 (2,9)
QQI7	28 (30,1)	22 (21,2)	65 (69,9)	81 (77,9)	0 (0)	1 (1)
QQI9	55 (59,1)	42 (40,4)	36 (38,7)	62 (59,6)	2 (2,2)	0 (0)
QQI10	6 (6,5)	9 (8,7)	82 (88,2)	88 (84,6)	5 (5,4)	7 (6,7)
QQI12	74 (79,6)	76 (73,1)	14 (15,1)	14 (13,5)	5 (5,4)	14 (13,5)
QQI13	57 (61,3)	72 (69,2)	34 (36,6)	24 (23,1)	2 (2,2)	8 (7,7)

QUI = Quiz on Urinary Incontinence

Regarding statements approaching treatment and effects of urinary incontinence, 31.2% of women in the public sector and 29.8% of private sector agreed with the statement that most people who have involuntary loss of urine lives a normal life (Statement 6). The Statement 13, which states that surgery is the best treatment for involuntary loss of urine, was answered correctly by 36.6% of women in the public sector and 23.1% of the private sector (p =0.04). In the Statement 14, about which there are exercises that can help control the loss of urine when a person coughs, laughs or sneezes, 51.6% of respondents from the public sector and 67.3 % of private sector responded correctly (p = 0.01). The Statement 4, which states that in addition to absorbent, diapers and probes, little can be done to treat or cure the involuntary loss of urine, was answered correctly by 78.5% of women in the public sector and 85.6% of private sector (p=0.3). Of the women interviewed, 93.5% of the public sector and 93.3% in the private sector (p=0.7) correctly agreed with the statement that many people who have involuntary loss of urine can be cured and almost all significantly improve (Statement 11). The statement 5, which states that once people begin to lose control over urine and this is repeated on a regular basis, they can often never regain complete control, 82.8% women in the public sector and 89.4 % private sector (p=0.1) answered correctly (Table 4).

Regarding the statements that deal with the causes of urinary incontinence, a large percentage of women in both groups, 88.2% of the public sector and 84.6% in the private sector (p=0.7), disagreed with the statement that urinary incontinence can be caused by only one or two conditions (Statement 10).

Table 4 - Statements answered correctly for each of the two study groups - women attending the public service and the private sector.

Statements	Public Sector n=93 (47,2%)	Private Sector n=104 (52,8%)	P
QQI1	64 (68,8)	67 (64,4)	0,8
QQI2	36 (38,7)	30 (28,8)	0,1
QQI3	50 (53,8)	46 (44,2)	0,1
QQI4	73 (78,5)	89 (85,6)	0,3
QQI5	77 (82,8)	93 (89,4)	0,1
QQI6	29 (31,2)	31 (29,8)	0,7
QQI7	65 (69,9)	81 (77,9)	0,1
QQI8	70 (75,3)	81 (77,9)	0,7
QQI9	36 (38,7)	62 (59,6)	0,004
QQI10	82 (88,2)	88 (84,6)	0,7
QQI11	87 (93,5)	97 (93,3)	0,7
QQI12	74 (79,6)	76 (73,1)	0,1
QQI13	34 (36,6)	24 (23,1)	0,04
QQI14	48 (51,6)	70 (67,3)	0,01

QUI= Quiz on Urinary Incontinence

In the statement 3, 53.8% of women in the public sector and 44.2 % of the private sector ($p= 0.1$) agreed that drugs can cause urine leakage. The statement 8 states that women are more likely to develop urinary incontinence than men and the 12 states that the involuntary loss of urine can be caused by various medical conditions easily treated, and both were answered correctly by the majority of women (75.3% of the public sector and 77.9% of the private sector, $p=0.7\%$) (Statement 8), and (79.6% of the public sector and 73.1% of the private sector, $p=0.1$) (Statement 12) (Table 4).

With respect to statements that relate to the relationship between age and urinary incontinence, most women in both groups (68.8% in the public sector and 64.4% in the private sector, $p=0.8$) responded correctly when they disagree with the statement 1, which states that the involuntary loss of urine is a result of normal aging. However, a minority of women in both groups, 38.7% of the public sector and 28.8% in the private sector ($p=0.1$), disagreed with the statement 2 that most people lose control of urine regularly when they reach age 85 (Table 4).

As for the statements that deal with the relationship between doctor and patient, they correctly answered the Statement 7 that disagreed that most physicians ask for their older patients if they have problems with bladder control, 69.9% of women in the public sector and 77.9% of private sector ($p=0.1$). Among the women interviewed, 38.7% of the public sector and 59.6 % in the private sector ($p=0.004$) disagreed with the Statement 9, which states that most people with involuntary urine loss mention it to their doctors (table 4).

DISCUSSION

The urinary incontinence is a condition that significantly affects the quality of life of women^{8,12}. Such influence varies according economic, social and cultural data^{8,12}. Many women with urinary incontinence and impaired quality of life do not seek care^{7,25}. The aim of this study was to determine whether social and educational factors could influence the recognition of involuntary loss of urine as a disease.

The groups showed significant difference with regard to education and family income, demonstrating real socioeconomic difference.

The results of this study show that the prevalence of urinary incontinence in women above 40 years of age was 20.3%. Data slightly lower than in other studies in our population (26.2% to 43%)^{5,9,10,11}. But higher than the prevalence of 16.4% of women with involuntary loss of urine found in a study of 213 women with a mean age of 44.3 years in Campinas, São Paulo⁷.

In the public sector, 26.9% had urinary incontinence and in the private sector, 14.4% ($p=0.03$), although some authors have shown no difference in the risk of urinary incontinence in relation to the socio-economic level¹⁰. This finding may be explained by the difference in the number of pregnancies between the two groups, as well as the amount of vaginal deliveries. The pregnancy itself is considered a risk factor for urinary incontinence¹⁴. Urinary incontinence occurs in approximately one third to half of all pregnant women, believed to be caused by a combination of hormonal and mechanical factors^{10, 25}.

When compared with nulliparous women, both vaginal delivery and caesarian showed increased risk for urinary incontinence^{2,14,20}. However, the vaginal delivery alone is not the cause of urinary incontinence but rather when associated with injuries and traumas of pelvic floor^{2,14,20}.

In our study, among incontinent women in the public sector, 52% sought medical care and in the private sector, 60%. Low prevalence, as well as found in two different studies in Campinas, state of São Paulo (34.3%⁷ and 58.8%¹⁹).

More than half of women in both groups correctly agreed or disagreed with the statements of the questionnaire covering knowledge about urinary incontinence, as treatment and effect, causes, relationship between age and urinary incontinence and doctor/patient relationship. This shows that regardless of socioeconomic level, the level of knowledge about urinary incontinence is equivalent. In another study performed in Massachusetts (USA), however, noted that younger individuals, women or those who had higher formal education responded more correctly the questionnaire²⁴.

In a study performed in the city of São Paulo, lack of knowledge, negative attitudes and misinformation about various aspects of urinary incontinence were identified¹¹. It was reported that from the 14 statements contained in the questionnaire on urinary incontinence, the majority of the study population correctly agreed or disagreed in only three statements¹¹. In our study, the selected population responded correctly nine from the 14 statements.

In a study performed in Hong Kong showed that among a population group with a predominance of higher education level, 78.3% of participants did not know that urinary incontinence was a disorder, and 60.6% thought that the urine leakage was a normal aging process²⁶.

In workers women in Denmark showed that a third of those who were incontinent believed that urinary incontinence is a major problem to solve, 46% said that this problem needed steps, approximately 40% responded that they did not know how to alleviate the problem and 10% could not improve it, 81% requested more informa-

tion on the causes, diagnosis, treatment and management of urinary incontinence²⁷.

The questionnaire on urinary incontinence in a group of 117 women from a rural community, with over 55 years found that more than half indicated incorrectly that incontinence is a normal result of advanced age²⁸. Almost a third of participants believed incorrectly that most people become incontinent when they reach over 85 years old²⁸. In our study, more than half of women in both groups correctly disagreed the fact that incontinence is a normal result of old age. However, the minority disagreed that most people become incontinent when they reach over 85 years of age.

This study focused on two groups of women with socioeconomic differences, in northeastern Brazil that showed knowledge of incontinence greater than similar studies^{11,26,27,28}. It should be noted that the sample size of each group was small compared to other studies^{11,26,27,28}, and that the population of public service assessed, where one would expect a lower level of knowledge, came from the University Hospital where there are several students and health professionals used to provide guidance to patients. Perhaps, then, a larger sample of patients and the assessment of patients from basic health center from more peripheral regions of the city might have shown a difference.

It is stimulated, thus more studies with larger samples and more diverse population to best approach this issue that so affects the quality of life of women.

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