The individual determinants of care-seeking among middle-aged women reporting urinary incontinence: Analysis of a 2273-woman cohort.

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Abstract

Aims: Our main objective was to analyze individual determinants that lead middle-aged women to seek medical care for UI.

Methods: Observational longitudinal study among GAZEL cohort participants: 2640 women aged 50-62 completed a self-administered questionnaire at baseline. Eight years later (2008) 2273 (86%) responded to a follow-up questionnaire. Seeking care for UI was defined as any consultation for UI during the 8-year follow-up period. Individual determinants considered in the regression analysis were social and demographic characteristics, social relations, UI type and severity, and other health factors.

Results: Among 1192 women reporting incontinence at baseline, 24.4% had visited a physician at least once for UI during the follow-up period (56.0% of those reporting severe UI). The care-seeking rate increased with age at baseline. Multivariate analysis showed that women who reported severe UI (OR= 4.1; 95%CI 2.6-6.5), mixed UI(2.0; 1.3-3.0), or neurologic disease (1.6; 1.1-2.6), had weak social support (1.4; 1.0-2.0), or talked about their UI with close friends or family (1.5; 1.0-2.1) were more likely to seek care for UI. A model including these factors had a 78% probability of correctly differentiating women with incontinence who chose to seek care from those who did not. Our analysis could not take factors related to the organization of health services into account.

Conclusions: Women do not always seek care for UI, even when it is severe. Besides UI severity and type, consultation is associated with aging, weak social support, conversation about it with close friends and family, and neurologic disorders.

Keywords: female urinary incontinence, care-seeking, longitudinal study

Introduction

Urinary incontinence (UI) is a common symptom in women, one that can cause disability and healthcare expenditures. In a European study of 17 080 women, 35% reported UI; among the latter, only 31% had ever consulted a physician about UI, 5% had used medication for it, and 5% had undergone surgery for it [1]. In the United States the percentage of hospital admissions with a primary diagnosis of UI was 44/100 000 in 2000, and the number of outpatient visits 1 845/100 000 [2]. The direct cost of UI in the US was estimated at $12.4 billion in 1995 [3]. In France and elsewhere, health authorities are actively taking steps to improve care for UI.

The demand for care appears to be associated with UI severity [4], and is likely to be proportional to both the severity of symptoms and their impact on quality of life (QoL). It is also likely that social factors, such as social relations, can influence the demand for care. Women may obtain advice from their close friends and family and thus consult their physician less often. But women with strong social relations may also be more likely to receive advice from their relatives to seek care. Middle-aged women often rely on advice from friends and family for their menopause symptoms [5].A better understanding of the determinants of care-seeking could help adapt health policy in the domain of UI and improve its management.

Our main objective in this longitudinal study in the GAZEL cohort was to analyze the individual determinants (severity of disorder, social relations and social and demographic characteristics) associated with seeking care for UI among middle-aged women. Our secondary objective was to analyze the characteristics associated with satisfaction after a medical consultation for UI and after treatment.

Population and Methods

Our sample consisted of middle-aged women participating in the GAZEL cohort, made up of employees of the French public power company who had volunteered in 1989 to respond to various self-administered health questionnaires, then and in the years to come (www.gazel.inserm.fr) [6]. They were 50-70 years of age during the period of this study — from 2000 to 2008. In 2000 (baseline), they were questioned in detail about lower urinary tract symptoms [4,7,8]. Additional data were collected in 2008 (follow-up) in a questionnaire focusing on lower urinary tract symptoms, doctors' visits, and health care since 2000. Of the 2640 women who had responded in 2000, 2273 (86%) responded again in 2008; they constitute our sample for this analysis.

Seeking UI care was defined as any office visit for UI during the follow-up period. The question asked of each participant was “Since the year 2000, have you consulted a doctor about involuntary urine leakage?” Those who answered yes to the question were asked if the medical visit met their expectations (“not at all”, “a little”, “somewhat”, “very”, or “completely”). Dissatisfaction was defined by an answer of “not at all” or “a little”. Women with doctors' visits for UI were questioned about the treatment provided and whether if its results met their expectations (“poorer than”, “the same as”, or “better than" expected).

Independent variables considered were social and demographic characteristics (age, educational level, occupation, household income, size of the city of residence, parity, number of people living in the home, and marital status), and lifestyle data (smoking, alcohol consumption, and physical exercise). Data about social network (an index based on marital status, contacts with children not living at home, parents, parents-in-law, other family members, and friends, and participation in voluntary groups or

associations), social support (a scale based on 2 items about emotional support and 2 items about instrumental support), and social satisfaction (a scale based on the quality of relationships with individuals the participant feels close to) came from the New Haven EPESE scale [9]. UI was defined as any involuntary urinary leakage reported during the previous 12 months. The Sandvik UI severity score was computed from UI frequency and amount of leakage [10]. UI type, urgency, and frequency were determined with the BFLUTS questionnaire; women were considered to suffer from stress UI, urge UI, or mixed UI if they answered “sometimes”, “most of the time”, or “all of the time” to the questions: “Does urine leak when you are physically active, exert yourself, cough or sneeze?” or “Does urine leak before you can get to the toilet?” [11]. Additional data about discussing UI with close friends or family, partners or colleagues, were also collected. Health variables considered were body mass index, menopausal status, climacteric symptoms, diabetes, endocrinopathy, hypertension, cardiovascular disease, neurologic disease, chronic bronchitis or cough, lumbar (or sciatic) pain, use of diuretics, antidepressants, sleeping pills or other medications, consultations with their general practitioner, and generic health-related QoL (Nottingham Health Profile).

First we compared the characteristics of responders and non-responders. The independent variables considered in the analysis of care-seeking were structured in three dimensions: 1) social and demographic characteristics and lifestyle, 2) UI severity and type, and discussion of UI with others, and 3) other health variables (listed in the preceding paragraph). Bivariate and multivariate analyses for each dimension produced separate multivariate models, one focused on social and demographic variables (Model 1), another on UI (Model 2), and a third on health factors (Model 3). Variables were introduced into each model if they were associated

with seeking care for UI in the bivariate analysis with $p< 0.20$. A fourth and global multivariate model included the variables associated ($p<0.15$) with care-seeking in one of the three preceding models. Forward stepwise regression analyses were conducted for each multivariate model to exclude variables with $p>0.15$.

Analyses of dissatisfaction with the consultation for UI, on the one hand, and with the results of the treatment, on the other, were conducted with the same independent variables. Bivariate analyses were performed to select variables associated with dissatisfaction ($p<0.20$), which were then introduced into the multivariate models.

All multivariate analyses were adjusted for age. To assess the fit of our logistic models and measure their predictive power, we performed a receiver operating characteristic (ROC) analysis. We estimated the area under the ROC curve, that is, the c-statistic (or concordance index). Its value varies from 0.5 (predictive power no better than chance) to 1.0 (perfect predictive power) [12]. We also assessed separately the predictive power of each variable included in the final model for care seeking with the same concordance index. All analyses were performed with SAS software (SAS Institute Inc., Cary, NC, USA).

The GAZEL cohort scientific committee and the CNIL (French Data Protection Authority) approved this study. This work was funded by the IRESP (Institute for Public Health Research), which had no role in the conduct of the study or the analysis of the data.

Results

The 2273 women responding at follow-up had a higher occupational status, reported fewer people living in their home, were more likely to exercise, and less likely to report hypertension, cardiovascular disease, or use of sleeping pills than the 265 non-respondents (Table I).

At follow-up, the respondents' mean age was 63 (sd ±3.36; range 58-70; no difference with non-respondents, data not shown). At baseline, 52.4% (1192) had reported some UI. Among these 1192 incontinent women, 291 (24.4%) had visited a physician for UI at least once during the follow-up period. This rate increased with the frequency of leakage at baseline: 18.1% (166/916) if less than once a week, 40.0% (56/140) if weekly, and 50.7% (69/136) if daily. It also increased according to age at baseline, 20.6% (58/282) at 49-51 years, 23.9% (91/380) at 52-54, 25.9% (69/266) at 55-57, and 27.7% (73/264) at 58-62. Among the 1065 women continent at baseline, the incidence of UI in 2008 was 50.0% (532), and the rate of seeking care for UI during the follow-up period was 5.3% (57).

Seeking care for UI was associated with high parity and weak social support (Table II, Model 1), with severe UI, mixed UI, and discussing UI with close friends or family (Table II, Model 2), and with poor QoL, a GP visit during the past 12 months, and neurologic disease (Table II, Model 3). In the final model, care-seeking was associated with severe UI, mixed UI, neurologic disease, discussion about UI with friends or close relatives, and weak social support (Table II). The concordance index of our final model was high (0.78). The c-statistic calculated for each variable included in the final model showed that the four variables that contributed most to predicting care-seeking were UI severity (c=0.74), UI type (c=0.72), discussing UI

with friends or close relatives (c=0.71), or with colleagues (c=0.70). The concordance index for the other variables (age, social support, quality of life, consultation with GP, and neurologic disease) was poor (between 0.52 and 0.58).

Of the 348 women (15.3%) who visited a physician for UI during the follow-up period, 21.6% (75) were not satisfied with the consultation (Table III). Dissatisfaction was not significantly associated with age (19.6% before 55 versus 25% after). The risk of dissatisfaction was associated with weak social support, urgency, and urge UI (Table IV). Women who reported chronic bronchitis or coughing were less likely to report dissatisfaction (Table IV).

During the 8-year follow-up period, 11.9% (270/2273) of the women were treated for UI; treatment outcome was consistent with or exceeded expectations for 52.6% (142/270) (Table III). Satisfaction was not significantly associated with age (47.6% before 55 versus 58.4% after). Women reporting diabetes were more likely to be satisfied with their treatment, and women with mixed UI or those with a poor QoL were more likely to be dissatisfied (Table V).

Discussion

In our sample of 2273 women aged 58-70 years reporting on events over an 8-year period, 348 (15.3%) visited a physician, and 270 (11.9%) underwent treatment for UI during the follow-up period. UI severity at baseline was the main reason for seeking healthcare for it. The percentage of women visiting a physician because of UI increased independently with both age and UI severity; other factors associated with consultation for UI were UI type (mixed), weak social support, discussing UI with close friends or family, and neurologic diseases. Rates of dissatisfaction with the visit and the treatment were 21.6% and 39.6% respectively.

It is unsurprising, even obvious, that the more severe the UI, the greater the demand for care. Nonetheless, confirming this clinical intuition requires following a sample of women likely to have UI, characterizing their urinary symptoms, and collecting information over a sufficient period of time. Strengths of our study include its longitudinal nature and our consideration of numerous factors collected in the GAZEL cohort, including occupational, social, demographic and medical characteristics, all of which may influence care-seeking. A cross-sectional study cannot provide a rigorous analysis of the association between current urinary symptoms and past care because the symptoms might have been improved or induced by the treatment, similarly, it cannot indicate whether current wishes for care will be followed up by actual care-seeking.

Of 331 women from the Boston area who reported UI on a weekly basis, 45% had sought care at least once [13]. Among those who sought care, 60% received it. In 47% of the cases, treatment was pelvic floor muscle exercise. This cross-sectional study found that neither socioeconomic level nor type of health insurance was associated with seeking care or treatment. Despite numerous differences, related in

particular to health insurance, survey method, and population, the rates of consultation and treatment in this Boston study are close to those observed in ours. This finding suggests that private health insurance is not a major obstacle to treatment for UI. In another cross-sectional survey, 26% of 6625 incontinent women had seen a physician for their UI [14]. Care-seeking increased with their age, UI severity, UI duration, and urge or mixed UI compared with stress UI. These results are consistent with ours; we showed a higher consultation rate for mixed UI (29.6%), a slightly lower one for urge UI (22.6%), and a rate of 12.9% for stress UI. This higher rate of consultation in case of mixed or urge UI is also found in other surveys [15,16]. Urge UI has a greater impact on QoL than stress UI [15]. The multiplicity of circumstances of leakage, their unpredictable character, urgency and abundance may explain this stronger demand for care in women with mixed UI. Our analysis also shows that, at equal levels of severity, those who report urge UI are much more dissatisfied with their medical consultation than the women with stress UI.

The women were, for the most part (75%), satisfied with their consultation, but only half (53%) found that the treatment outcome met or exceeded their expectations. Surveys in the general population usually show poor results compared to clinical trials performed by medical experts on selected patients. In the population-based study by Black et al. of women who had surgery for SUI, 28% were cured and 66% reported that the outcome met or exceeded their expectations [17].

In our study, more than 40% of the women with severe UI had not discussed it with a physician. The EPINCONT cross-sectional survey found similar results, with no consultation for 46% of the women who reported severe UI [14]. This lack of consultation may be explained by women's belief that UI is a normal consequence of aging or of motherhood, or the embarrassing nature of the situation, reluctance to be

213 treated over a long term, or lack of knowledge about the treatments [18,19]. Other
214 elements may be related to the woman's personality or her social relations. Women
215 who talk about their UI to others are more likely to see a physician for it [16,18]. We
216 found that those who talked about their UI to their family or friends are those who
217 sought care, probably because they were less ashamed or embarrassed about
218 talking about it, whether to friends or a physician.

219 Weak, versus strong social support was significantly associated with a higher rate of
220 care-seeking (20.6% vs 12.4%). We hypothesize that women with UI symptoms who
221 have strong social support are likely to receive help and advice without needing to
222 ask their physician, while those with low social support consult their physicians,
223 perhaps precisely because they have no one else to rely on. Social support was
224 defined by 4 questions exploring instrumental and emotional support, but only the
225 questions concerning instrumental support were significantly associated with care-
226 seeking for UI (data not shown).

227 The rate of consultation for UI was slightly higher among women with poor health-
228 related QoL (20.2%) than among those with a good QoL score (10.7%). Poor health-
229 related QoL probably results in more medical consultations and therefore increases
230 the opportunities to seek care for urinary disorders. Two studies found that women
231 were more likely to request care for UI when they were consulting a physician for
232 another reason than to make a special appointment for it [14,16], and women who
233 consulted their physician for UI have more comorbidities and saw physicians more
234 frequently [18]. It may be that a medical consultation is the occasion for screening for
235 symptoms or diseases not directly related to the initial reason for the consultation.
236 The case of neurologic diseases is particular because in some situations these can

affect continence. Unfortunately we do not have details about these neurologic diseases to develop further hypotheses.

In France, women may see a gynecologist without having to be referred by their GP; this is not the case for other specialists. This may explain why 53.5% consulted a gynecologist for UI and only 23.6% a urologist. Moreover there were substantially more gynecologists practicing in France than urologists [20].

O'Donnell et al found higher consultation rates for women with UI in France (33%) and Germany (40%) than in Spain (24%) or the UK (25%) [16]. These differences may be related to differences in the healthcare system (number of and access to specialists, university training, and information provided to women). Because our study was limited to France, we were unable to test any of these hypotheses. Other potential differences may be demographic, such as parity, or cultural, such as social support; both were significantly associated with seeking care for UI in our analysis.

Another limitation of our work is linked to characteristics of the GAZEL cohort, which is made up of present or past employees. Because they were all covered by public health insurance, we were not able to consider the possible effect of that factor. It is interesting to note that many incontinent women do not consult even though they are covered by health insurance. We do not know whether the medical consultations involved the woman's specific request or if the subject was broached on the occasion of a consultation for another reason. We were not able to consider the duration of symptoms, which is likely to play a role in the decision to see a physician. The reluctance to talk about incontinence that some women or some physicians may feel was not addressed in our study. We can not rule out the possibility of a recall bias relative to medical visits or treatment. Unfortunately healthcare records were not available to confirm the information.

Conclusions

Our results confirmed that even in a country where the healthcare system ensures reimbursement for medical expenses, including doctors' visits, numerous women do not see physicians although they have severe UI. The determinants of healthcare utilization are not only clinical; social relations also play a role. Progress is needed to give the many women who do not consult doctors despite severe UI a chance to talk to a physician about their condition and receive appropriate management that meets their expectations.

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Table I: Characteristics and comparison of respondents to the follow-up questionnaire (N=2273) and non-respondents (N=265), analysis adjusted for age.

Characteristics at baseline (2000) except: *1989, **1990-96, ***1994.		Follow-up questionnaire (2008)				
		Responders (N=2273)		Non-responders (N=265)		
		n	%	n	%	p
Age	<55	1282	56.4	134	50.6	0.07
	55+	991	43.6	131	49.4	
Occupational category*	management	192	8.7	16	6.3	0.008
	supervisor, sales representative	1460	66.1	157	61.8	
	office worker, employee	556	25.2	81	31.9	
Parity **	0-1	925	40.7	101	38.1	0.36
	>=2	1348	59.3	164	61.9	
Number of persons at home	>=3	626	27.5	91	34.3	0.004
Physical exercise	yes	1205	53.0	102	38.5	0.001
BMI (kg/m²)	<25	1489	65.5	157	60.1	0.14
	>=25	784	34.6	104	39.9	
Social support scale ***	weak	541	26.5	56	27.2	0.71
	moderate	699	34.3	73	35.4	
	strong	798	39.2	77	37.4	
Social satisfactionscale***	good	1335	65.2	122	58.6	0.06
	poor	714	34.8	86	41.4	
Social network index ***	weak	1303	68	133	67.5	0.88
	strong	614	32	64	32.5	
Difficulty retaining urine	Yes	1260	56.4	144	55.6	0.78
Involuntary urinary leakage	Yes	1192	52.8	127	48.9	0.21
UI hygienic or social problem	Yes	518	23.3	52	20.1	0.23
UI type	No UI	1065	47.1	133	50.8	0.67
	Stress UI	337	14.9	32	12.2	
	Urge UI	62	2.7	8	3.1	
	Mixed UI	782	34.6	88	33.6	
	Undetermined UI type	16	0.7	1	0.4	
UI severity (Sandvik score)	No UI (0)	1065	47.2	133	51.1	0.69
	Mild (1-2)	845	37.4	86	33.1	
	Moderate (3-4)	231	10.2	23	8.9	
	Severe (6-8)	116	5.2	18	6.9	
Hypertension or cardiovascular disease	yes	641	28.2	95	35.8	0.02
Medication use	yes	1299	58.4	165	64.7	0.08
Sleeping pill use	yes	198	8.9	37	14.5	0.001

Table II: Women's characteristics at baseline associated with care-seeking for UI during the 8-year follow-up period. Each logistic regression is adjusted for age. ORs are in bold when p < 0.05.

	Model 1 Social demographic			Model 2 Urinary incontinence			Model 3 Health issues			Final Model		
Characteristics	N	%	adjusted OR [95%CI]	N	%	adjusted OR [95%CI]	N	%	adjusted OR [95%CI]	N	%	adjusted OR [95%CI]
Age/ 3-year	1859		1.1 [1.0-1.3]	2257		**1.1 [1.0-1.3]**	2159		**1.1 [1.0-1.3]**	1931		1.1 [1.0-1.3]
Parity												
<2	730	13.4	1									
>=2	1129	17.1	**1.4 [1.1-1.9]**									
Number of persons at home												
<3	1351	16.6	1									
>=3	508	13.2	0.8 [0.6-1.1]									
Social network index												
good	595	13.1	1									
weak	1264	16.9	1.3 [0.9-1.7]									
Social support scale												
strong	744	12.4	1							748	13.1	1
moderate	643	15.9	1.2 [0.9-1.7]							668	15.4	1.2 [0.8-1.6]
weak	472	20.6	**1.6 [1.1-2.2]**							515	20.0	**1.4 [1.0-2.0]**
Social satisfaction scale												
good	1236	14.1	1									
poor	623	18.8	1.2 [0.9-1.6]									
UI severity at baseline (Sandvik)												
no UI				1065	5.3	**0.5 [0.3-0.7]**				898	5.3	**0.5 [0.3-0.8]**
mild				845	17.5	1				733	17.9	1
moderate				231	33.8	**1.9 [1.4-2.7]**				197	34.0	**1.8 [1.2-2.6]**
severe				116	56.0	**4.4 [2.9-6.7]**				103	56.3	**4.1 [2.6-6.5]**
UI type												
no UI (2000)				1065	5.3	.				898	5.3	.
stress UI				333	12.9	1				292	13.0	1
urge UI				62	22.6	1.7 [0.9-3.5]				56	23.2	1.9 [0.9-3.9]
mixed UI				781	29.6	**2.1 [1.4-3.0]**				675	30.1	**2.0 [1.3-3.0]**
Discussion of UI with friends or close relatives												
no UI (2000)				1065	5.3	.				898	5.3	.
no				886	20.7	1				751	20.9	1
yes				306	35.3	**1.4 [1.0-2.0]**				282	35.1	**1.5 [1.0-2.1]**
Discussion of UI with colleagues												
no UI (2000)				1065	5.3	.				898	5.3	
no				1107	23.0	1				954	23.4	1
yes				85	42.4	1.5 [0.9-2.6]				79	41.8	1.5 [0.9-2.7]
Quality of life (NHP)												
good							717	10.7	1	643	10.6	1
moderate							717	15.5	**1.5 [1.1-2.0]**	636	16.0	1.3 [0.9-1.9]
poor							752	20.4	**2.0 [1.5-2.7]**	652	20.6	1.3 [0.9-1.9]
Consultation with GP in the last 12 months												
no							86	14.6	1	81	4.9	1
yes							2073	16.0	**3.3 [1.2-9.2]**	1850	16.2	2.4[0.8-6.9]
Neurologic disease												
no							2001	14.7	1	1797	14.9	1
yes							158	25.9	**1.6 [1.1-2.4]**	134	26.9	**1.6 [1.1-2.6]**
Hypertension or cardiovascular disease												
no							1550	14.1	1			
yes							609	19.2	1.3 [1.0-1.6]			
concordance index	0.60			0.77			0.62			0.78		

OR for age was calculated continuously but is reported by 3-year increments.

Variables not found to be significant and not shown: educational level, occupation, household incomes, size of city of residence, marital status, physical exercise, alcohol consumption, smoking, discussion of UI with partner, UI as hygienic or social problem, frequency, urgency, BMI, menopausal status, hot flushes, vaginal dryness,

diabetes or endocrinopathy, chronic bronchitis or cough, lumbar or sciatic pain, drug consumption, diuretic consumption, antidepressant consumption, and sleeping pill use.

Table III: Consultation, treatment for UI, and satisfaction (N=2273)

		N	%
Consultation for UI	none	1925	84.7
	one	236	10.4
	several	112	4.9
Physicians' gender	man	152	43.7
	woman	133	38.2
	both	33	9.5
	data missing	30	8.6
Physicians' specialty	General Practitioner	150	43.1
	Gynecologist	186	53.5
	Urologist	82	23.6
	other	20	5.8
Satisfied with consultation	missing data	12	3.4
	not at all or a little	75	21.6
	somewhat, very or completely	261	75.0
Treatment of UI	none	2003	88.1
	one	189	8.3
	several	81	3.6
Surgery	one procedure	88	32.6
	several	4	1.5
Medication	one type	30	11.1
	several	24	8.9
Pelvic floor exercise	one prescription	93	34.4
	several	91	33.7
Other treatment	one	6	2.2
	several	2	0.7
Satisfaction with treatment outcome	missing data	21	7.8
	poorer than expected	107	39.6
	same as or better than expected	142	52.6

Table IV: Women's characteristics at baseline associated with dissatisfaction with the doctor's visit for UI during the 8-year follow-up period. Logistic regression adjusted for age. OR are indicated bold when p < 0.05.

Characteristics	N	Age adjusted OR [95%CI]	Full adjusted OR [95%CI]
Number of persons at home			
<3	262	1.0	
>=3	74	0.5 [0.3-1.1]	
Social support scale			
strong	99	1	1
moderate	102	0.7 [0.3-1.5]	0.9 [0.4-2.1]
weak	105	**1.9 [1.0-3.7]**	**2.2 [1.2-5.3]**
Urgency			
no	133	1	1
yes	197	**3.7 [2.0-7.0]**	**2.7 [1.2-5.9]**
UI hygienic or social problem			
no	110	1	
yes	162	1.6 [0.9-2.8]	
UI Type			
stress UI	42	1	1
urge UI	14	**15 [2.6-89]**	**16 [1.5-171]**
mixed UI	224	**7.1 [1.7-31]**	6.0 [0.7-48]
UI severity (Sandvik)			
mild	142	1	1
moderate	76	**2.7 [1.4-5.3]**	1.8 [0.8-3.9]
severe	64	**2.4 [1.2-4.8]**	2.0 [0.9-4.4]
Quality of life (NHP)			
moderate or good	192	1.0	
poor	144	**1.7 [1.0-2.9]**	
Hot flushes			
no	165	1.0	
yes	171	1.6 [0.9-2.7]	
Chronic bronchitis or cough			
no	310	1	1
yes	26	0.4 [0.1-1.4]	**0.2 [0.0-0.9]**
Hypertension or cardiovascular disease			
no	223	1.0	
yes	113	1.5 [0.9-2.5]	
Medication use			
no	119	1.0	
yes	209	1.7 [0.9-3.1]	
Antidepressant use			
no	275	1.0	
yes	53	1.6 [0.8-3.1]	
concordance index			0.77

Variables not found to be significant and not shown here: educational level, occupation, household incomes, marital status, parity, size of the city of residence, physical exercise, alcohol consumption, smoking, BMI, social network index, social satisfaction scale, discussion of UI with friends close relatives, colleagues, or partner, frequency, consultation with GP, menopausal status, vaginal dryness, diabetes or endocrinopathy, neurologic disease, lumbar or sciatic pain, diuretic use, and sleeping pill use.

Table V: Women's characteristics at baseline associated with dissatisfaction with UI treatment during the 8-year follow-up period. Logistic regression adjusted for age. OR are indicated bold when $p < 0.05$.

Characteristics	N	Age adjusted OR [95%CI]	Full adjusted OR [95%CI]
Marital status			
alone	52	1	1
couple	197	0.6 [0.3-1.1]	0.6 [0.3-1.2]
BMI			
<25	167	1	
25+	82	1.3 [0.8-2.3]	
Social network index			
weak	157	1	1
good	62	0.6 [0.3-1.0]	
UI Type			
stress UI	37	1	1
urge UI	10	**3.1 [0.7-13.3]**	2.5 [0.5-11.7]
mixed UI	165	**2.8 [1.2-6.3]**	**2.8 [1.2-6.6]**
UI severity (Sandvik)			
mild	110	1	1
moderate	57	1.6 [0.8-3.0]	1.5 [0.7-3.2]
severe	47	**2.2[1.1-4.4]**	2.1 [1.0-4.5]
UI treatment*			
surgery	77	1	1
médication	37	1.3 [0.6-3.0]	1.6 [0.7-3.9]
pelvic floor exercise	129	1.1 [0.6-1.9]	1.6 [0.8-3.1]
Discussion of UI with friends or close relatives			
no	132	1	
yes	82	1.5 [0.9-2.7]	
Discussion of UI with colleagues			
no	184	1	1
yes	30	1.8 [0.8-4.1]	2.1 [0.8-5.1]
Urgency			
no	99	1	1
Yes	145	**2.1 [1.2-3.6]**	
Quality of life (NHP)			
moderate or good	149	1	1
poor	100	**2.1 [1.3-3.6]**	**2.1 [1.2-3.7]**
Hypertension or cardiovascular disease			
no	165	1	1
yes	84	1.4 [0.9-2.5]	1.8 [1.0-3.3]
Diabetes or endocrinopathy			
no	197	1	1
Yes	52	0.6 [0.3-1.1]	**0.4 [0.2-0.8]**
Concordance index			0.70

Variables not found to be significant and not shown here: educational level, occupation, number of persons at home, household incomes, parity, size of the city of residence, physical exercise, alcohol consumption, smoking, social satisfaction scale, social support scale, UI hygienic or social problem, discussion of UI with partner, frequency, consultation with GP in the last 12 months, menopausal status, hot flushes, vaginal dryness, chronic bronchitis or cough, neurologic disease, lumbar or sciatic pain, medication use, antidepressant use, diuretic use, and sleeping pill use.

*Type of treatment was defined as followed: surgery: alone or combined with another type of treatment; medication: alone or combined with another treatment except surgery; pelvic floor exercise: alone or combined with another treatment except medication or surgery.