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

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1 Abstract

2 <u>Aims</u>: Our main objective was to analyze individual determinants that lead middle-
3 aged women to seek medical care for UI.

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

11 <u>Results</u>: Among 1192 women reporting incontinence at baseline, 24.4% had visited a
12 physician at least once for UI during the follow-up period (56.0% of those reporting
13 severe UI). The care-seeking rate increased with age at baseline. Multivariate
14 analysis showed that women who reported severe UI (OR= 4.1; 95%CI 2.6-6.5),
15 mixed UI(2.0; 1.3-3.0), or neurologic disease (1.6; 1.1-2.6), had weak social support
16 (1.4; 1.0-2.0), or talked about their UI with close friends or family (1.5; 1.0-2.1) were
17 more likely to seek care for UI. A model including these factors had a 78% probability
18 of correctly differentiating women with incontinence who chose to seek care from
19 those who did not. Our analysis could not take factors related to the organization of
20 health services into account.

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

24

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

26

27 Introduction

28 Urinary incontinence (UI) is a common symptom in women, one that can cause

29 disability and healthcare expenditures. In a European study of 17 080 women, 35%

30 reported UI; among the latter, only 31% had ever consulted a physician about UI, 5%

31 had used medication for it, and 5% had undergone surgery for it [1]. In the United

32 States the percentage of hospital admissions with a primary diagnosis of UI was

33 44/100 000 in 2000, and the number of outpatient visits 1 845/100 000 [2]. The direct

34 cost of UI in the US was estimated at $12.4 billion in 1995 [3]. In France and

35 elsewhere, health authorities are actively taking steps to improve care for UI.

36 The demand for care appears to be associated with UI severity [4], and is likely to be

37 proportional to both the severity of symptoms and their impact on quality of life (QoL).

38 It is also likely that social factors, such as social relations, can influence the demand

39 for care. Women may obtain advice from their close friends and family and thus

40 consult their physician less often. But women with strong social relations may also be

41 more likely to receive advice from their relatives to seek care. Middle-aged women

42 often rely on advice from friends and family for their menopause symptoms [5].A

43 better understanding of the determinants of care-seeking could help adapt health

44 policy in the domain of UI and improve its management.

45 Our main objective in this longitudinal study in the GAZEL cohort was to analyze the

46 individual determinants (severity of disorder, social relations and social and

47 demographic characteristics) associated with seeking care for UI among middle-aged

48 women. Our secondary objective was to analyze the characteristics associated with

49 satisfaction after a medical consultation for UI and after treatment.

50

51 <u>Population and Methods</u>

52 Our sample consisted of middle-aged women participating in the GAZEL cohort,

53 made up of employees of the French public power company who had volunteered in

54 1989 to respond to various self-administered health questionnaires, then and in the

55 years to come (www.gazel.inserm.fr) [6]. They were 50-70 years of age during the

56 period of this study — from 2000 to 2008. In 2000 (baseline), they were questioned in

57 detail about lower urinary tract symptoms [4,7,8]. Additional data were collected in

58 2008 (follow-up) in a questionnaire focusing on lower urinary tract symptoms,

59 doctors' visits, and health care since 2000. Of the 2640 women who had responded

60 in 2000, 2273 (86%) responded again in 2008; they constitute our sample for this

61 analysis.

62 Seeking UI care was defined as any office visit for UI during the follow-up period. The

63 question asked of each participant was "Since the year 2000, have you consulted a

64 doctor about involuntary urine leakage?" Those who answered yes to the question

65 were asked if the medical visit met their expectations ("not at all", "a little",

66 "somewhat", "very", or "completely"). Dissatisfaction was defined by an answer of "not

67 at all" or "a little". Women with doctors' visits for UI were questioned about the

68 treatment provided and whether if its results met their expectations ("poorer than",

69 "the same as", or "better than" expected).

70 Independent variables considered were social and demographic characteristics (age,

71 educational level, occupation, household income, size of the city of residence, parity,

72 number of people living in the home, and marital status), and lifestyle data (smoking,

73 alcohol consumption, and physical exercise). Data about social network (an index

74 based on marital status, contacts with children not living at home, parents, parents-

75 in-law, other family members, and friends, and participation in voluntary groups or

76 associations), social support (a scale based on 2 items about emotional support and

77 2 items about instrumental support), and social satisfaction (a scale based on the

78 quality of relationships with individuals the participant feels close to) came from the

79 New Haven EPESE scale [9]. UI was defined as any involuntary urinary leakage

80 reported during the previous 12 months. The Sandvik UI severity score was

81 computed from UI frequency and amount of leakage [10]. UI type, urgency, and

82 frequency were determined with the BFLUTS questionnaire; women were considered

83 to suffer from stress UI, urge UI, or mixed UI if they answered "sometimes", "most of

84 the time", or "all of the time" to the questions: "Does urine leak when you are

85 physically active, exert yourself, cough or sneeze?" or "Does urine leak before you

86 can get to the toilet?" [11]. Additional data about discussing UI with close friends or

87 family, partners or colleagues, were also collected. Health variables considered were

88 body mass index, menopausal status, climacteric symptoms, diabetes,

89 endocrinopathy, hypertension, cardiovascular disease, neurologic disease, chronic

90 bronchitis or cough, lumbar (or sciatic) pain, use of diuretics, antidepressants,

91 sleeping pills or other medications, consultations with their general practitioner, and

92 generic health-related QoL (Nottingham Health Profile).

93 First we compared the characteristics of responders and non-responders. The

94 independent variables considered in the analysis of care-seeking were structured in

95 three dimensions: 1) social and demographic characteristics and lifestyle, 2) UI

96 severity and type, and discussion of UI with others, and 3) other health variables

97 (listed in the preceding paragraph). Bivariate and multivariate analyses for each

98 dimension produced separate multivariate models, one focused on social and

99 demographic variables (Model 1), another on UI (Model 2), and a third on health

100 factors (Model 3). Variables were introduced into each model if they were associated

101   with seeking care for UI in the bivariate analysis with p< 0.20. A fourth and global

102   multivariate model included the variables associated (p<0.15) with care-seeking in

103   one of the three preceding models. Forward stepwise regression analyses were

104   conducted for each multivariate model to exclude variables with p>0.15.

105   Analyses of dissatisfaction with the consultation for UI, on the one hand, and with the

106   results of the treatment, on the other, were conducted with the same independent

107   variables. Bivariate analyses were performed to select variables associated with

108   dissatisfaction (p<0.20), which were then introduced into the multivariate models.

109   All multivariate analyses were adjusted for age. To assess the fit of our logistic

110   models and measure their predictive power, we performed a receiver operating

111   characteristic (ROC) analysis. We estimated the area under the ROC curve, that is,

112   the c-statistic (or concordance index). Its value varies from 0.5 (predictive power no

113   better than chance) to 1.0 (perfect predictive power) [12]. We also assessed

114   separately the predictive power of each variable included in the final model for care

115   seeking with the same concordance index. All analyses were performed with SAS

116   software (SAS Institute Inc., Cary, NC, USA).

117   The GAZEL cohort scientific committee and the CNIL (French Data Protection

118   Authority) approved this study. This work was funded by the IRESP (Institute for

119   Public Health Research), which had no role in the conduct of the study or the

120   analysis of the data.

121

122

123 <u>Results</u>

124 The 2273 women responding at follow-up had a higher occupational status, reported

125 fewer people living in their home, were more likely to exercise, and less likely to

126 report hypertension, cardiovascular disease, or use of sleeping pills than the 265

127 non-respondents (Table I).

128 At follow-up, the respondents' mean age was 63 (sd $\pm$3.36; range 58-70; no

129 difference with non-respondents, data not shown). At baseline, 52.4% (1192) had

130 reported some UI. Among these 1192 incontinent women, 291 (24.4%) had visited a

131 physician for UI at least once during the follow-up period. This rate increased with the

132 frequency of leakage at baseline: 18.1% (166/916) if less than once a week, 40.0%

133 (56/140) if weekly, and 50.7% (69/136) if daily. It also increased according to age at

134 baseline, 20.6% (58/282) at 49-51 years, 23.9% (91/380) at 52-54, 25.9% (69/266) at

135 55-57, and 27.7% (73/264) at 58-62. Among the 1065 women continent at baseline,

136 the incidence of UI in 2008 was 50.0% (532), and the rate of seeking care for UI

137 during the follow-up period was 5.3% (57).

138 Seeking care for UI was associated with high parity and weak social support (Table

139 II, Model 1), with severe UI, mixed UI, and discussing UI with close friends or family

140 (Table II, Model 2), and with poor QoL, a GP visit during the past 12 months, and

141 neurologic disease (Table II, Model 3). In the final model, care-seeking was

142 associated with severe UI, mixed UI, neurologic disease, discussion about UI with

143 friends or close relatives, and weak social support (Table II). The concordance index

144 of our final model was high (0.78). The c-statistic calculated for each variable

145 included in the final model showed that the four variables that contributed most to

146 predicting care-seeking were UI severity (c=0.74), UI type (c=0.72), discussing UI

147   with friends or close relatives (c=0.71), or with colleagues (c=0.70). The concordance

148   index for the other variables (age, social support, quality of life, consultation with GP,

149   and neurologic disease) was poor (between 0.52 and 0.58).

150   Of the 348 women (15.3%) who visited a physician for UI during the follow-up period,

151   21.6% (75) were not satisfied with the consultation (Table III). Dissatisfaction was not

152   significantly associated with age (19.6% before 55 versus 25% after). The risk of

153   dissatisfaction was associated with weak social support, urgency, and urge UI (Table

154   IV). Women who reported chronic bronchitis or coughing were less likely to report

155   dissatisfaction (Table IV).

156   During the 8-year follow-up period, 11.9% (270/2273) of the women were treated for

157   UI; treatment outcome was consistent with or exceeded expectations for 52.6%

158   (142/270) (Table III). Satisfaction was not significantly associated with age (47.6%

159   before 55 versus 58.4% after). Women reporting diabetes were more likely to be

160   satisfied with their treatment, and women with mixed UI or those with a poor QoL

161   were more likely to be dissatisfied (Table V).

162

163   Discussion

164   In our sample of 2273 women aged 58-70 years reporting on events over an 8-year

165   period, 348 (15.3%) visited a physician, and 270 (11.9%) underwent treatment for UI

166   during the follow-up period. UI severity at baseline was the main reason for seeking

167   healthcare for it. The percentage of women visiting a physician because of UI

168   increased independently with both age and UI severity; other factors associated with

169   consultation for UI were UI type (mixed), weak social support, discussing UI with

170   close friends or family, and neurologic diseases. Rates of dissatisfaction with the visit

171   and the treatment were 21.6% and 39.6% respectively.

172   It is unsurprising, even obvious, that the more severe the UI, the greater the demand

173   for care. Nonetheless, confirming this clinical intuition requires following a sample of

174   women likely to have UI, characterizing their urinary symptoms, and collecting

175   information over a sufficient period of time. Strengths of our study include its

176   longitudinal nature and our consideration of numerous factors collected in the GAZEL

177   cohort, including occupational, social, demographic and medical characteristics, all of

178   which may influence care-seeking. A cross-sectional study cannot provide a rigorous

179   analysis of the association between current urinary symptoms and past care because

180   the symptoms might have been improved or induced by the treatment, similarly, it

181   cannot indicate whether current wishes for care will be followed up by actual care-

182   seeking.

183   Of 331 women from the Boston area who reported UI on a weekly basis, 45% had

184   sought care at least once [13]. Among those who sought care, 60% received it. In

185   47% of the cases, treatment was pelvic floor muscle exercise. This cross-sectional

186   study found that neither socioeconomic level nor type of health insurance was

187   associated with seeking care or treatment. Despite numerous differences, related in

188   particular to health insurance, survey method, and population, the rates of

189   consultation and treatment in this Boston study are close to those observed in ours.

190   This finding suggests that private health insurance is not a major obstacle to

191   treatment for UI. In another cross-sectional survey, 26% of 6625 incontinent women

192   had seen a physician for their UI [14]. Care-seeking increased with their age, UI

193   severity, UI duration, and urge or mixed UI compared with stress UI. These results

194   are consistent with ours; we showed a higher consultation rate for mixed UI (29.6%),

195   a slightly lower one for urge UI (22.6%), and a rate of 12.9% for stress UI. This higher

196   rate of consultation in case of mixed or urge UI is also found in other surveys [15,16].

197   Urge UI has a greater impact on QoL than stress UI [15]. The multiplicity of

198   circumstances of leakage, their unpredictable character, urgency and abundance

199   may explain this stronger demand for care in women with mixed UI. Our analysis also

200   shows that, at equal levels of severity, those who report urge UI are much more

201   dissatisfied with their medical consultation than the women with stress UI.

202   The women were, for the most part (75%), satisfied with their consultation, but only

203   half (53%) found that the treatment outcome met or exceeded their expectations.

204   Surveys in the general population usually show poor results compared to clinical

205   trials performed by medical experts on selected patients. In the population-based

206   study by Black et al. of women who had surgery for SUI, 28% were cured and 66%

207   reported that the outcome met or exceeded their expectations [17].

208   In our study, more than 40% of the women with severe UI had not discussed it with a

209   physician. The EPINCONT cross-sectional survey found similar results, with no

210   consultation for 46% of the women who reported severe UI [14]. This lack of

211   consultation may be explained by women's belief that UI is a normal consequence of

212   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

237   affect continence. Unfortunately we do not have details about these neurologic

238   diseases to develop further hypotheses.

239   In France, women may see a gynecologist without having to be referred by their GP;

240   this is not the case for other specialists. This may explain why 53.5% consulted a

241   gynecologist for UI and only 23.6% a urologist. Moreover there were substantially

242   more gynecologists practicing in France than urologists [20].

243   O'Donnell et al found higher consultation rates for women with UI in France (33%)

244   and Germany (40%) than in Spain (24%) or the UK (25%) [16]. These differences

245   may be related to differences in the healthcare system (number of and access to

246   specialists, university training, and information provided to women). Because our

247   study was limited to France, we were unable to test any of these hypotheses. Other

248   potential differences may be demographic, such as parity, or cultural, such as social

249   support; both were significantly associated with seeking care for UI in our analysis.

250   Another limitation of our work is linked to characteristics of the GAZEL cohort, which

251   is made up of present or past employees. Because they were all covered by public

252   health insurance, we were not able to consider the possible effect of that factor. It is

253   interesting to note that many incontinent women do not consult even though they are

254   covered by health insurance. We do not know whether the medical consultations

255   involved the woman's specific request or if the subject was broached on the occasion

256   of a consultation for another reason. We were not able to consider the duration of

257   symptoms, which is likely to play a role in the decision to see a physician. The

258   reluctance to talk about incontinence that some women or some physicians may feel

259   was not addressed in our study. We can not rule out the possibility of a recall bias

260   relative to medical visits or treatment. Unfortunately healthcare records were not

261   available to confirm the information.

262 <u>Conclusions</u>

263 Our results confirmed that even in a country where the healthcare system ensures

264 reimbursement for medical expenses, including doctors' visits, numerous women do

265 not see physicians although they have severe UI. The determinants of healthcare

266 utilization are not only clinical; social relations also play a role. Progress is needed to

267 give the many women who do not consult doctors despite severe UI a chance to talk

268 to a physician about their condition and receive appropriate management that meets

269 their expectations.

270

283

284   References

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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	
	supervisor, sales representative	1460	66.1	157	61.8	0.008
	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	
	moderate	699	34.3	73	35.4	0.71
	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	
	Stress UI	337	14.9	32	12.2	
	Urge UI	62	2.7	8	3.1	0.67
	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	
	Mild (1-2)	845	37.4	86	33.1	
	Moderate (3-4)	231	10.2	23	8.9	0.69
	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.

Characteristics	Model 1 Social demographic			Model 2 Urinary incontinence			Model 3 Health issues			Final Model		
	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	%
<u>Consultation for UI</u>	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
<u>Treatment of UI</u>	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.