

THE BURDEN OF UNTREATED PATIENTS EXPERIENCING SYMPTOMS OF OVERACTIVE BLADDER

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BACKGROUND

- Overactive bladder (OAB) is a urologic syndrome characterized by urinary urgency, with or without urge incontinence, usually in combination with frequent urination and nocturia^{1,2}.
- Symptoms:
 - Urgency:** Sudden, compelling desire to pass urine that is difficult to defer.
 - Frequency:** Urinating more than eight times in a day.
 - Urge incontinence:** Involuntary loss of urine occurring for no apparent reason while feeling urinary urgency.
 - Nocturia:** Interrupted sleep because of an urge to void twice or more a night.
- The reluctance of those with OAB to seek medical advice can leave a considerable part of the population untreated, with significant personal and societal costs.

OBJECTIVE

- To assess the health-related quality of life (HRQoL) burden of individuals in Europe who experience symptoms of OAB but are not treated.

METHODS

Data Source

- Data were taken from the 5EU (France, Germany, Italy, Spain, and UK) 2013 National Health and Wellness Survey (NHWS), a cross-sectional survey representative of the total adult populations in each 5EU market. In total, 62,000 respondents participated in the survey in 2013.

Sample

- The 1,347 respondents who reported a diagnosis of OAB (Table 1) were excluded from the analyses.
- Among the remaining 60,653 respondents, 17,519 reported symptoms compatible with OAB (red), while 43,134 did not report any (green).

Variables

- Grouping variable:** Presence of OAB symptoms:
 - At least one of the symptoms included in the definition (urgency, frequency, urge incontinence, nocturia) experienced in the past 6 months.
- Health-related Quality of Life (HRQoL):** The SF-36v2 was used to assess HRQoL. This is a generic health survey and one of the most commonly used patient-reported outcomes measures³. Several scores are produced:
 - Physical Component Summary (PCS):** An index of overall physical health status.
 - Mental Component Summary (MCS):** An index of overall mental and emotional health status.
 - Health Utility Score (SF-6D):** A preference-based index describing overall health on a scale from 0 (no better than death) to 1 (equivalent to perfect health), with an empirical floor of 0.3.
- Work Productivity and Activity Impairment (WPAI):** The WPAI questionnaire⁴, a 6-item validated instrument, consists of four metrics:
 - Absenteeism:** The percentage of work time missed because of one's health in the past seven days.
 - Presenteeism:** The percentage of impairment experienced while at work in the past seven days because of one's health.
 - Overall work impairment:** A combination of absenteeism and presenteeism.
 - Activity impairment:** The percentage of impairment in daily activities because of one's health in the past seven days.
 - Only full-time, part-time, or self-employed respondents provided data for absenteeism, presenteeism, and overall work impairment. All respondents provided data for activity impairment.
- Other variables of interest:** Demographics (age, gender, marital status, education, income, and employment status), BMI, alcohol and smoking behavior.

Analysis

- Bivariate analyses between the symptomatic and asymptomatic group were performed with chi² tests for categorical variables and t-tests for cardinal variables.
- A multivariate regression model tested the relationship between reporting OAB symptoms, sociodemographics, and the three Quality of Life components measured by the SF-36v2 (MCS, PCS, and Health Utility)⁵.

Table 1: Survey Population

5EU	No OAB Symptoms	OAB Symptoms	Total
No OAB Prescription	43,134 69.57%	17,519 28.26%	60,653 97.83%
OAB Prescription	182 0.29%	1,165 1.88%	1,347 2.17%
Total	43,316 69.86%	18,684 30.14%	62,000 100%

Note: Cells contain counts and percentages of the overall survey population.

RESULTS

- The OAB group, compared to the controls, had a higher percentage of women, was older, with a lower education level, less were in a relationship, less were employed, more were obese, they had lower HRQoL, lower work productivity, and higher activity impairment; see Table 2. All differences were significant (p < 0.001).

References

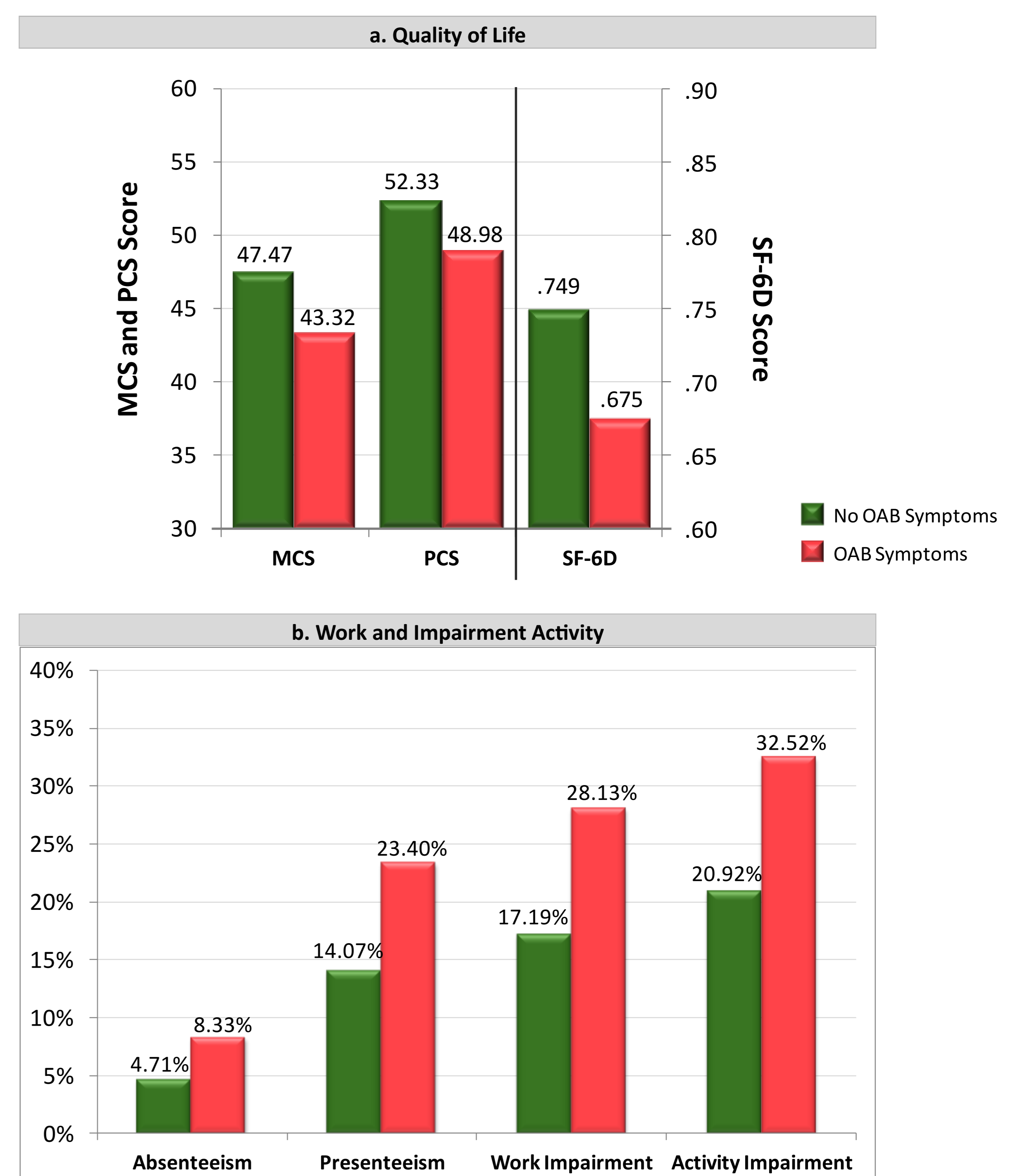
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Table 2: Bivariate Analyses

Variable	OAB Symptoms		Control		Chi ²	P Value
	N	%	N	%		
Gender					18.54	<0.001
Male	7,892	45.05%	20,261	46.97%		
Female	9,627	54.95%	22,873	53.03%		
Education					27.81	<0.001
College	8,204	47.19%	19,207	44.83%		
Less than College	9,182	52.81%	23,641	55.17%		
Living with Partner					32.49	<0.001
No	12,241	69.87%	29,113	67.49%		
Yes	5,278	30.13%	14,021	32.51%		
Employment Status					519.45	<0.001
Not Employed	8,586	49.01%	16,795	38.94%		
Employed	8,933	50.99%	26,339	61.06%		
BMI					547.06	<0.001
Underweight	544	3.11%	1,309	3.03%		
Normal Weight	6,747	38.51%	19,754	45.80%		
Overweight	5,940	33.91%	14,155	32.82%		
Obese	3,891	22.21%	6,552	15.19%		
Decline to Answer	397	2.27%	1,364	3.16%		
Alcohol Use					82.65	<0.001
Do Not Drink	11,811	67.42%	30,689	71.15%		
Drink Alcohol	5,708	32.58%	12,445	28.85%		
Currently Smoke					49.12	<0.001
Do Not Smoke	12,800	73.06%	32,688	75.78%		
Smoke	4,719	26.94%	10,446	24.22%		
Country					144.18	<0.001
France	4,452	25.41%	10,339	23.97%		
Germany	3,799	21.69%	10,771	24.97%		
Italy	2,628	15.00%	7,221	16.74%		
Spain	2,039	11.64%	4,847	11.24%		
UK	4,601	26.26%	9,956	23.08%		
Variable	N	Mean	N	Mean	t	P Value
Age (years)	17,519	49.06	43,134	45.62	-24.36	<0.001
BMI	17,122	26.79	41,770	25.65	-23.08	<0.001
Quality of Life (SF-36v2)						
Mental Component Summary	17,519	43.47	43,134	47.39	41.79	<0.001
Physical Component Summary	17,519	48.37	43,134	52.58	54.41	<0.001
Health Utility (SF-6D)	17,519	0.67	43,134	0.75	63.17	<0.001
Work Productivity (WPAI)						
Absenteeism	8,584	8.46	25,283	4.68	-16.21	<0.001
Presenteeism	8,308	23.60	24,794	14.09	-32.03	<0.001
Overall Work Impairment	8,584	28.35	25,283	17.20	-32.04	<0.001
Activity Impairment	17,519	33.12	43,134	20.79	-49.53	<0.001

- The linear regressions on the three components of HRQoL measured by the SF-36v2 (MCS, PCS, and Health Utility) confirm that the presence of OAB symptoms has a significant negative impact on all three components (p<0.01); see Figure 1a.
- After controlling for all other variables, all sociodemographics contribute to this difference, including country of residence, with Germany having the highest MCS and Italy having both the highest PCS and lowest Health Utility.
- The Breusch-Pagan test of independence attests that the three outcome measures are significantly correlated (chi²(3)=56,458.87, p < 0.001). Correlations are weak among MCS and PCS (r_s=0.15) and stronger between Health Utility and MCS (r_s=0.72) or PCS (r_s=0.63).

Figure 1: Adjusted Means



- The individual linear regressions on work productivity and activity impairment measured by the WPAI (Absenteeism, Presenteeism, Overall Work Impairment, and Activity Impairment) confirm that the presence of OAB symptoms results in a significant increase in all four indexes (p<0.05); see Figure 1b.
- After controlling for all other variables, all sociodemographics contribute to this difference, including country of residence, with Germany having the highest absenteeism and Italy having the highest degree of impairment on each of the other indexes.

CONCLUSIONS

- Respondents reporting symptoms compatible with OAB but that are not treated and would not be captured by clinical studies are significantly worse-off than the rest of the population, e.g., in their quality of life, income, and work productivity.
- Regression-adjusted decrement of OAB symptoms exceeds the 3-point burden usually considered the minimally-important difference for MCS and PCS scores³.
- This suggests a significant unmet need for treatment of OAB symptoms in Europe.

LIMITATIONS

- Further analyses should complete the description of the burden and costs of non-treated OAB patients (work productivity, healthcare resource utilization, and indirect costs).

