



# Impact of overactive bladder symptoms on employment, social interactions and emotional well-being in six European countries

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Accepted for publication 10 Aug 2005

## OBJECTIVE

To determine the impact of overactive bladder (OAB) symptoms on issues related to employment, social interactions, and emotional well-being in a population aged 40–64 years.

## SUBJECTS AND METHODS

The study comprised a cross-sectional population-based survey of 11 521 individuals aged 40–64 years, conducted in France, Germany, Italy, Spain, Sweden, and the UK. The survey involved a two-stage screening procedure. Initially, individuals with any lower urinary tract symptoms were identified. Those whose only symptom(s) was suggestive of a urinary tract infection, stress incontinence, or prostate obstruction were excluded from further study. Respondents were asked questions about the impact that their

symptoms had on their emotional well-being, social interactions and productivity at home and at work.

## RESULTS

Of those with OAB, ≈32% (1272) reported that having these symptoms made them feel depressed, and 28% reported feeling very stressed. There were statistically significant differences in reported feelings of stress and depression when OAB symptoms were stratified by OAB with incontinence (OAB+) vs those with OAB with no incontinence (OAB–), with values for emotional stress of OAB+ 36.4% vs OAB– 19.6%, for depression of OAB+ 39.8% vs OAB– 23.3%. Participants with OAB+ were significantly more likely than those with OAB– to express worry about having accidents and concern about participating in activities away from home because of their bladder symptoms. In

addition, those with OAB+ were significantly more likely to report that these bladder symptoms were a source of great concern and made them feel uncomfortable in social situations compared to those with OAB–. Men were significantly more likely than women to report OAB+ having an impact on their daily work life, including worry about interrupting meetings, impact on decisions about work location and hours, and voluntary termination or early retirement. This effect was primarily in men reporting OAB+.

## CONCLUSION

OAB symptoms have a significant effect on the emotional well-being and productivity of those affected, both at home and at work.

## KEYWORDS

overactive bladder, epidemiology, productivity, symptom perception

## INTRODUCTION

Overactive bladder (OAB) is a common condition characterized by urgency, and for many of those affected, urgency urinary incontinence, frequency and nocturia. Previous reports estimated the overall European prevalence of OAB symptoms to be 16.6%, affecting >22 million people aged >40 years [1]. Several clinical trials have documented that OAB significantly compromises health-related quality of life (HRQoL) and that treatment for OAB can benefit HRQoL [2]. OAB symptoms can affect many areas of functioning, including social, psychological and occupational domains [3,4]. People with OAB often try to compensate for their abnormal urinary symptoms by

adopting coping behaviours to avoid the feeling of urgency and potential urinary leakage.

A recent population-based cross-sectional survey [5] reported that in a subset of participants, OAB had a clinically significant impact on QoL, quality of sleep, and mental health. To date, few population-based prevalence surveys have been published reporting the impact of OAB symptoms on aspects of occupational, psychological and social life. The primary objective of the present study was to determine the prevalence of any negative impact associated with OAB symptoms on issues related to employment and emotional well-being in people aged 40–64 years in six European countries.

## SUBJECTS AND METHODS

A cross-sectional population-based survey was conducted in France, Germany, Italy, Spain, Sweden and the UK; a more detailed description of the study methods was published previously [1]. Interviews were conducted by telephone except in Spain, where direct interviews were conducted because of the lower proportion of households having a telephone. A random sample in each country was obtained by a stratified approach based on geographical variables. At least 300 individuals with OAB symptoms were interviewed in each country to obtain a nationally representative sample.

The questionnaire involved a two-stage screening procedure that initially identified

individuals with LUTS and then further characterized their urinary condition. To minimize bias, the first stage was conducted within the context of questions on the occurrence of common health complaints during the previous year. The first stage was designed to exclude participants whose only urinary symptom was suggestive of a UTI, stress urinary incontinence (SUI), or prostatic obstruction. Those individuals who reported urinating frequently during the day, waking up several times at night because of the need to void, feeling urgency to void, or experiencing urinary leakage associated with urgency proceeded to the next screening stage. Individuals reporting these LUTS and symptoms of UTI, SUI or prostatic obstruction were included in the analyses. For these individuals detailed information on symptoms was elicited. Symptoms attributable to OAB included positive responses to specific questions on frequency, urgency, urge incontinence or nocturia. This definition of OAB (frequency, urgency, urge incontinence or nocturia) was the internationally accepted definition of OAB at the time the participants were interviewed and was the definition used in the original analyses of this data [1].

Respondents aged 40–64 years (total 11 521) with OAB symptoms or mixed symptoms (both OAB and SUI) were included in all of the analyses (1272). These symptomatic respondents were asked more detailed questions on the influence of the disorder on their daily life. Specifically, they were asked about the negative impact associated with OAB symptoms on employment and emotional well-being.

For the statistical analysis, data were stratified after collection in each country, to match the age and gender distribution. The combined database of the six countries used a weighting scheme so that the number of interviews reflected the population size in each country. Percentages listed in the results are therefore weighted. To examine the difference between groups, chi-squared tests with 0.5% two-sided significance level were used.

## RESULTS

The characteristics of the interviewed population and the individuals reporting OAB symptoms are described in Table 1. Most of the symptomatic OAB population was aged >55 years (54.7%) and married (76.3%). Of

**TABLE 1** Characteristics of the interviewed population (11 521) and OAB population (1272) aged 40–64 years

Characteristic	Interviewed, %*	OAB, %*
Age, years		
40–44	22.3	11.8
45–49	20.0	14.7
50–54	19.6	18.8
55–59	20.5	27.1
60–64	17.6	27.6
Male	49.2	42.4
Completed higher or university education	49.2	40.4
Married	79.7	76.3
Employed full- or part-time	57.5	42.6

\*percentages are weighted.

those reporting OAB symptoms, ≈40% had completed university or higher education, and 43% were currently employed either full- or part-time.

Table 2 shows the proportion of the OAB population who had great concern, extreme stress and depression about their symptoms; ≈32% of this group reported that these symptoms made them feel depressed, 28% felt stressed due to their bladder symptoms, and 28% reported that their symptoms were a source of concern. There were statistically significant differences in reported stress, concern and depression when OAB symptoms were stratified by gender and OAB with (+) and without (–) incontinence (Table 2). Because of their bladder problems, participants with OAB+ were significantly more likely than those with OAB– to express worry about having accidents and concern about participating in activities away from home (Table 2). In addition, participants with OAB+ were significantly more likely to report that these bladder symptoms made them feel uncomfortable in social situations (Table 2).

Overall, 76% of individuals reporting OAB symptoms stated that this condition interfered with or made it more difficult to perform daily activities. Despite these perceived limitations, women were more likely than men to report that OAB symptoms were not severe enough to be worth consulting a doctor (40% women, 34% men), did not represent a valid medical condition (48% women, 40% men), and are ignored by the medical community (28% women, 19% men) (Fig. 1). Men were significantly more likely

than women to report these symptoms as something they have to learn to live with (79% men, 74% women), a natural part of the ageing process (76% men, 67% women) and result of lifestyle factors (37% men, 31% women) (Fig. 1). These results did not vary dramatically when stratified by OAB type (+ or –; data not shown).

Men were significantly more likely than women to report OAB+ as having an impact on their daily work life, including worry about interrupting meetings (38% men vs. 22% women), decisions about work location and hours (21% men vs 8% women) and voluntary termination or early retirement (27% men vs 4% women). For OAB– the differences in reporting rates between men and women for each of these categories was less marked (Fig. 2).

## DISCUSSION

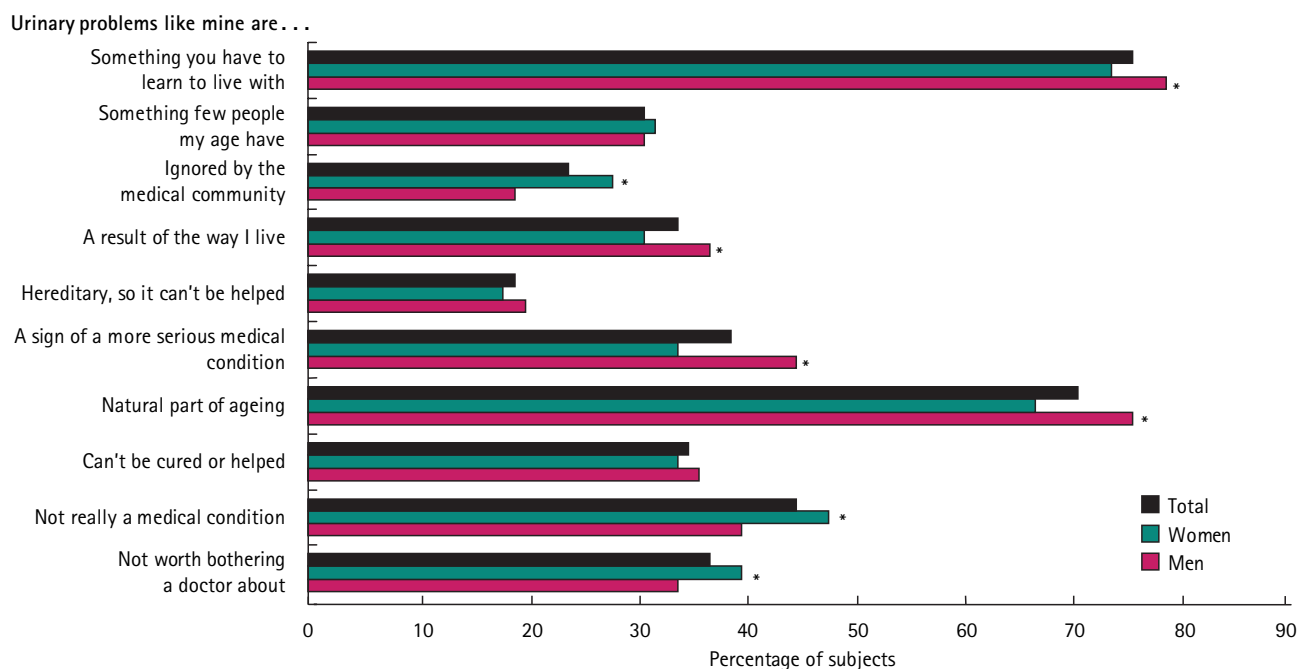
Most previous studies evaluating health-related outcomes in those with OAB have been conducted in clinic-based populations [6,7] or clinical trials [2]. In addition, many of these studies focus on urinary incontinence only and not the broader spectrum of OAB symptoms. Findings from these types of studies are more likely to reflect the experience of speciality-care patients and/or patients who have more severe symptoms. Very few population-based prevalence surveys have been published that document the impact of OAB symptoms on patients' QoL. One such report [5] noted that OAB (+ or –) was associated with clinically and

TABLE 2 The impact of OAB symptoms on social interactions and emotional well-being, stratified by gender and type of OAB symptom (+ or -)

Having this condition . . .	Men, %		Women, %		Total, %
	OAB+	OAB-	OAB+	OAB-	
is of great concern for me	39.2*	18.1	34.6*	20.3	27.2
makes me concerned about doing things away from home	39.0*	18.9	36.4*	19.0	28.0
makes me uncomfortable with people I don't know	33.8*	15.7	27.7*	15.3	22.2
makes me uncomfortable with people I know	30.2*	13.6	24.7*	16.6	20.2
makes me concerned about having an accident	34.5*	13.5	32.2*	10.7	22.6
is very stressful	39.0*	18.3	35.7*	22.1	28.0
makes me depressed	47.5*	24.5	37.9*	21.0	31.6

\* $P \leq 0.05$ ; percentages are weighted.

FIG. 1. OAB symptom perception by gender; the percentages are weighted.



\* $P \leq 0.05$  vs men.

statistically lower QoL scores, higher depression scores and poorer quality of sleep. The results from the present analyses confirm the negative impact of OAB symptoms on patients' QoL.

The definition of OAB (frequency, urgency, urge incontinence or nocturia) used for these analyses is broader than the current internationally accepted definition (urgency, with or without urgency urinary incontinence, usually with frequency and nocturia) that was introduced in 2002 [8] after completing the present study. The definition used was that accepted at the time of the study and was the

definition used in the original analyses of the study population [1]. As a broader definition was used, the percentages of the population with OAB are probably higher than if the newer definition had been in place at the time of this study.

About a third of the OAB population reported feeling depressed and more than a quarter had stress or concern due to their symptoms. Population-based surveys report the prevalence of depression in the general population to be  $\approx 8.6\%$  in five European countries [9]. Although detailed mental-health data were not collected in the present

survey, nonetheless the results indicate that depression and stress are highly prevalent issues for individuals with OAB symptoms. The present results are similar to those of another depression survey reporting that 30% of patients with urinary incontinence had significant levels of depression [10]. Additionally, other studies documented that depressed patients with untreated OAB tend to increase their use of antidepressants over time [11].

The present analysis indicates that symptoms of incontinence in OAB patients have a significant effect on the ability of patients to

feel comfortable in social situations, e.g. participating in activities away from home and in situations involving people they know well, as well as those they do not know well. This is probably due to the additive effect of the urgency symptoms combined with a fear of incontinence.

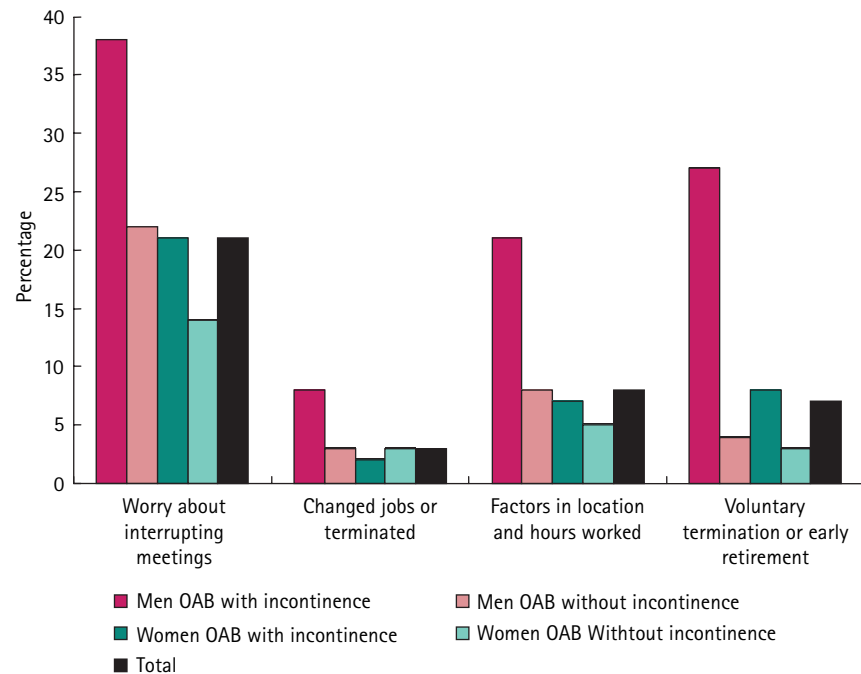
One deficit of the current study is that there was no adequate comparison group within the interviewed population. Individuals with no bladder symptoms were not asked all of the detailed questions. However, the symptomatic participants were asked to report specifically the impact their urinary problems had directly on their lives. Of those with OAB, 20–30% reported that their symptoms had a negative impact on their daily social activities ('uncomfortable being with people' 20–22%, 'concern about accidents' 23%, 'concern about activities outside the home' 28%, 'interferes with daily activities' 24%).

OAB symptoms also had a negative impact on patients' working lives. Over 21% of the population worried about interrupting meetings with frequent trips to the toilet, and 3% of the population changed jobs or were fired because of their bladder control problems. Men with OAB-related incontinence were significantly more likely than women to report that their bladder control problems were a factor in their employment decisions (location, hours, termination, early retirement). To our knowledge, this is the first study to document the prevalence of the negative impact that OAB has on these employment issues.

Despite the debilitating effects of OAB symptoms, most individuals with OAB reported that their symptoms were something they had to learn to live with (74.3%) and were just a natural part of the ageing process (67.7%). In addition, many did not feel that their symptoms were worth discussing with a doctor (43%). Previously it was reported that few affected individuals seek medical care and receive medical treatment for their OAB symptoms [1,4]. Those who discuss their problem with their healthcare provider often have their symptoms for years before seeking care [4]. These findings imply that OAB is an under-diagnosed and under-treated condition.

OAB is a highly prevalent condition in the general population [1,5], few patients are

FIG. 2. Impact of OAB symptoms on employment by gender and presence of OAB incontinence symptoms. Percentages are weighted.  $P \leq 0.05$  for men with OAB with incontinence in each scenario except 'changed jobs or terminated'.



treated [1], and OAB symptoms have a significant effect on the emotional well-being and productivity of sufferers at home and at work. Taken together, such findings indicate that there is considerable scope for improvement in terms of how physicians diagnose and treat this condition. In addition, those with OAB symptoms should be encouraged to seek medical care. Future population-based surveys of OAB symptoms would benefit from including specific instruments to measure the impact on daily living activities, QoL and work productivity.

#### ACKNOWLEDGEMENTS

The authors thank J. Thuroff, A. Wein and R. Roberts for their contributions to the original study. This study was funded by Pfizer Inc.

#### CONFLICT OF INTEREST

Zoe Kopp is an employee of sponsor; Debra Irwin is a paid consultant to sponsor; Paul Abrams is a consultant to Pfizer and Novartis; Ian Milsom received an unrestricted grant from Pfizer and has Board Membership with sponsor. Source of funding: Pfizer.

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**Abbreviations:** HR(QoL), health-related (quality of life); OAB (+/–), overactive bladder (with/without incontinence).