

OVERACTIVE BLADDER IN FEMALE GRADUATE AND HEALTH PROFESSIONS STUDENTS: PREVALENCE, EFFECT ON QUALITY OF LIFE, AND RISK FACTORS

Hypothesis / aims of study

There is minimal data available on the prevalence of overactive bladder (OAB), the effect of OAB on quality of life (QOL), or the risk factors associated with OAB in young women. Also, there is little consistency in the methodology used in OAB studies, which makes it challenging to compare results across studies. The purposes of this study were to identify the prevalence of OAB, to evaluate the effect of OAB on QOL, and to identify factors associated with OAB in female graduate and health professions students. The hypotheses were that the prevalence of OAB in this group would be different from that reported in the general population, that the QOL of students identified as having OAB would be lower than QOL in those without OAB, and that some factors associated with OAB in this group would be the same as those identified in the general population.

Study design, materials and methods

The study was a cross-sectional design. All female graduate and health professions students from a local university were invited to participate (n=964), and 210 students responded. Participants filled out the Overactive Bladder Questionnaire (OAB-q), a 4-day bladder diary, and a demographic information questionnaire. Current International Continence Society definitions were used to identify the presence of urinary frequency, urgency, and nocturia, using the bladder diary. Overactive bladder was defined as the presence of an average of at least one episode of urinary urgency per day, reported on the bladder diary. An a-priori sample size calculation showed that an n of 42 (21 per group) was needed to detect a medium effect size on the OAB-q between participants who had OAB and those who did not.

Results

The response rate was 21.2%, and the average age of participants was 25.53 ± 3.71 . The prevalence of OAB was 21.6%, prevalence of urinary frequency was 29.9%, prevalence of nocturia was 43.1%, and prevalence of urinary incontinence was 4.4%. Unpaired t-tests were used to compare OAB-q scores for participants with OAB and those without OAB. There was a statistically significant difference in QOL between groups on all sub-scores of the OAB-q ($p = .001$ to $.025$, depending on subscale), with participants who had OAB reporting lower QOL, but most results did not reach clinical importance. Correlation between OAB and various factors was assessed using Spearman correlation coefficients, and binary stepwise backward conditional logistic regression was used to explore different potential risk factors. Overactive bladder was weakly correlated with caffeine intake ($r_s = .147$) and total irritants consumed ($r_s = .187$). Age, body mass index, units of caffeinated beverages consumed, and total units of irritants consumed were entered into the regression model. Only total units of irritants significantly increased the odds of an individual having OAB (odds ratio 1.401; $p = .001$).

Interpretation of results

While several large population-based studies have included the age group studied in this study, differences in research design and operational definitions make it difficult to compare the results of the current study with results reported in the literature. However, the results from this study indicate a high prevalence of OAB symptoms in female graduate and health professions students. Also, using a bladder diary to identify participants with OAB proved to be a viable method, and may be useful in studies such as this which have small sample sizes. Additionally, the results indicate that OAB has a statistically significant effect on QOL in female graduate and health professions students. Finally, regarding using regression to predict the presence of OAB, the small number of cases of OAB limited the number of predictors that could be analyzed. Given the low predictive value of the equation, it seems that there may be other factors that contribute to OAB in this segment of the population. There were several limitations to this study; most notably, it was done on a small sample of a specific population subset, and therefore has limited applicability to other groups.

Concluding message

Overactive bladder symptoms are common in female graduate and health professions students, and the symptoms have a negative effect on quality of life. Future research in this area is warranted to clarify what factors are most strongly related to OAB in this population, to validate a QOL measure for this population, and to identify the best diagnostic method for identifying OAB.

Disclosures

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