434

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PREVALENCE OF LUTS AMONG DRIVERS AND TICKET SELLERS OF BEIJING URBAN PUBLIC TRANSIT, AND EFFECT OF JOB STRESS AND BURNOUT ON LUTS

Hypothesis / aims of study

More and more attention is paid on urinary health status of varying occupations. There were studies on prevalence of LUTS among teachers, nurses, white collar and sedentary population already. Our former study on association between job stress and LUTS in nurses indicated occupational factors may contribute to LUTS. This study focused on prevalence of LUST among drivers and ticket sellers of Beijing urban public transit and effect of job stress and burnout on LUTS.

Study design, materials and methods

From December 2012 to February 2013, 1220 questionnairs were distributed to drivers and ticket sellers by Labor Unions of Beijing Public Transportation Corporation. Workers with one year or more experience and with no urinary tract infection were eligible. Participants were asked to complete self-administrated questionnaires, which includes five parts:1) demographics, 2) personal bladder habits, 3) LUTS questinnaire, 4)Job Stress Scale, 5)Maslach Burnout Inventory General Survey (MBI-GS). LUTS questinnaire, which were used to investigate prevalence of LUTS in Beijing nurses [1], were developed based on the Bristol Female Lower Urinary Tract Symptoms Questionnaire and the Taiwan Nurses Bladder Survey, and was found to have good validity and reliability among this study sample. Lower urinary tract symptoms were defined according to the definitions recommended

by the ICS 2002 Job Stress Scale were developed based on McLean's Job Content Questionnaire, with dimensions of time urgency added. MBI-GS is a tool for burnout measurement, Chinese version of which was demonstrated to have good reliability and validity. MBI-GS includes three dimensions: exhaustion, cynicism and professional efficacy. Prevalence of urinary urgency, increased daytime frequency, nocturia, urge UI and OAB in participants was computed. Multiple logistic regression model were performed to evaluate the effect of job stress and burnout on LUTS, adjusted for age and BMI.

Results

1135 valid questionnaires were obtained. Participants had a mean age of 38.4±7.59, range from 20 to 55. Male/ female ratio was 605/522. Prevalence of urinary urgency was 54.9% (n=623), and increased daytime frequency 66.1% (n=750), nocturia 66.1% (n=287), urge UI 37.4% (n=424), and OAB 44.0% (n=502). After ajusted for age and BMI, dimensions of Job Stress Scale and MBI-GS showed association with LUTS concerned (Table 1).

Interpretation of results

As a city of population overloaded, the city of Beijing has very busy traffic, which definitely bring public transport staff many health issues, urinary tract problems included. Our data showed that the transport staff had a relatively high prevalence of urinary urgency, increased daytime frequency, nocturia, urge UI and OAB. After ajusted for age and BMI, each dimension of Job Stress Scale and MBI-GS is associatd with at least one type of LUTS concerned. However, any ORs from multiple multiple logistic regression analysis is above or below one by no more than 10%.

Concluding message

Prevalence of LUTS in drivers and ticket sellers of Beijing urban public transit were high. Of many risk factors, perceived job stress and burnout were positively associated with LUST.

Table 1 Effect (ORs, (95%CI)) of dimensions of job stress and burnout on LUTS, after adjusted for age and BMI

	Urinary Urgency	Increased Daytime Frequency	Nocturia	Urge Ui	Oab
Job Stress					
Work Overload	1.031 (0.94-1.132)	0.979 (0.89-1.077)	1.084 (1.023-1.206)*	1.171 (1.046-1.311)	1.098 (1.039-1.160)*
Role Stress	1.023 (0.95-1.102)	1.078 (0.999-1.164)	0.972 (0.897-1.053)	1.211 (1.114-1.316)*	1.064 (0.99-1.143)
Organizational Mechanism	1.074 (1.047-1.102)*	1.019 (0.975-1.064)	1.022 (0.975-1.071)	1.079 (1.040-1.120)*	1.013 (0.971-1.057)
Personal Relationship	1.052 (0.963-1.148)	1.006 (0.919-1.102)	1.012 (0.918-1.115)	1.004 (0.907-1.112)	1.014 (0.929-1.106)
Time Urgency	1.019 (0.969-1.072)	0.942 (0.895-0.992)*	1.009 (0.954-1.066)	1.006 (0.95-1.065)	0.989 (0.941-1.04)
Burnout					
Exhaustion	1.002 (0.959-1.047)	1.011 (0.967-1.058)	1.002 (0.955-1.052)	0.957 (0.905-1.011)	0.987 (0.944-1.033)
Cynicism	1.002 (0.965-1.04)	0.987 (0.95-1.026)	0.978 (0.937-1.021)	1.058 (1.012-1.106)	1.02 (0.982-1.059)
Professional Efficacy	0.968 (0.944-0.992)*	0.893 (0.768-0.915)*	0.983 (0.956-1.011)	0.958 (0.928-0.988)	0.965 (0.941-0.989)*

*p<0.05.

References
1. 2. Chunfang Zhang, Ting Hai, Luping Yu, Shijun Liu, Qing Li, Xiaowei Zhang, Tao Xu, Xiao-feng Wang. Association between Occupational Stress and risk of Overactive Bladder and other Lower Urinary Tract Symptoms: A Cross-Sectional Study among Female Nurses of China. Neurourology and Urodynamics 32:254–260,doi: 10.1002/nau.22290.

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