Association between nocturia and lifestyle habits for good sleep based on Internet survey

Abstract #423

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Introduction and Objective

Nocturia is closely related to sleep problems, but its association with how the general public attempts to control sleep problems is less well-known. Here, we sought to determine the relationship between nocturia and lifestyle habits for good sleep based on an Internet survey in Japan

Methods

Subjects: 40-75-year-olds registered as monitors with JustSystems Inc.

Methods: We analyzed a cross-sectional internet survey conducted in July 2019 in collaboration with Intelligence Value, Inc. on the relationship between nocturia and lifestyle habits for good sleep. Rated by 1.Very true, 2.Somewhat true, 3.Somewhat untrue and 4.Very untrue, and unknown was excluded in the analysis.

Participants' Attempts to Good Sleep

- Taking a bath
- Dimming room lights
- Not looking at a smartphone after entering the bed
- Going to bed at a fixed time as much as possible
- Getting moderate exercise during the day
- Not drinking too much water
- Going to the bathroom before bedtime
- Drinking tea or other sleep-inducing drinks
- Drinking alcohol
- Using good bedding

Attempts to good sleep!

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Nocturia

Participants' characteristics

Number of participants	3317
Sex	
Men (n, %)	1707 (51.5)
Women (n, %)	1610 (48.5)
Median Age, years (quartile, range)	55 (48-63, 40-75)
Married (n, %)	2501 (75.4)
Residential region	
Hokkaido (n, %)	184 (5.5)
Tohoku (n, %)	195 (5.9)
Kanto (n, %)	1293 (39.0)
Chubu (n, %)	492 (14.8)
Kinki (n, %)	688 (20.1)
Chugoku (n, %)	134 (4.0)
Sikoku (n, %)	90 (2.7)
Kyushu (n, %)	241 (7.3)

Nocturnal urinary frequency
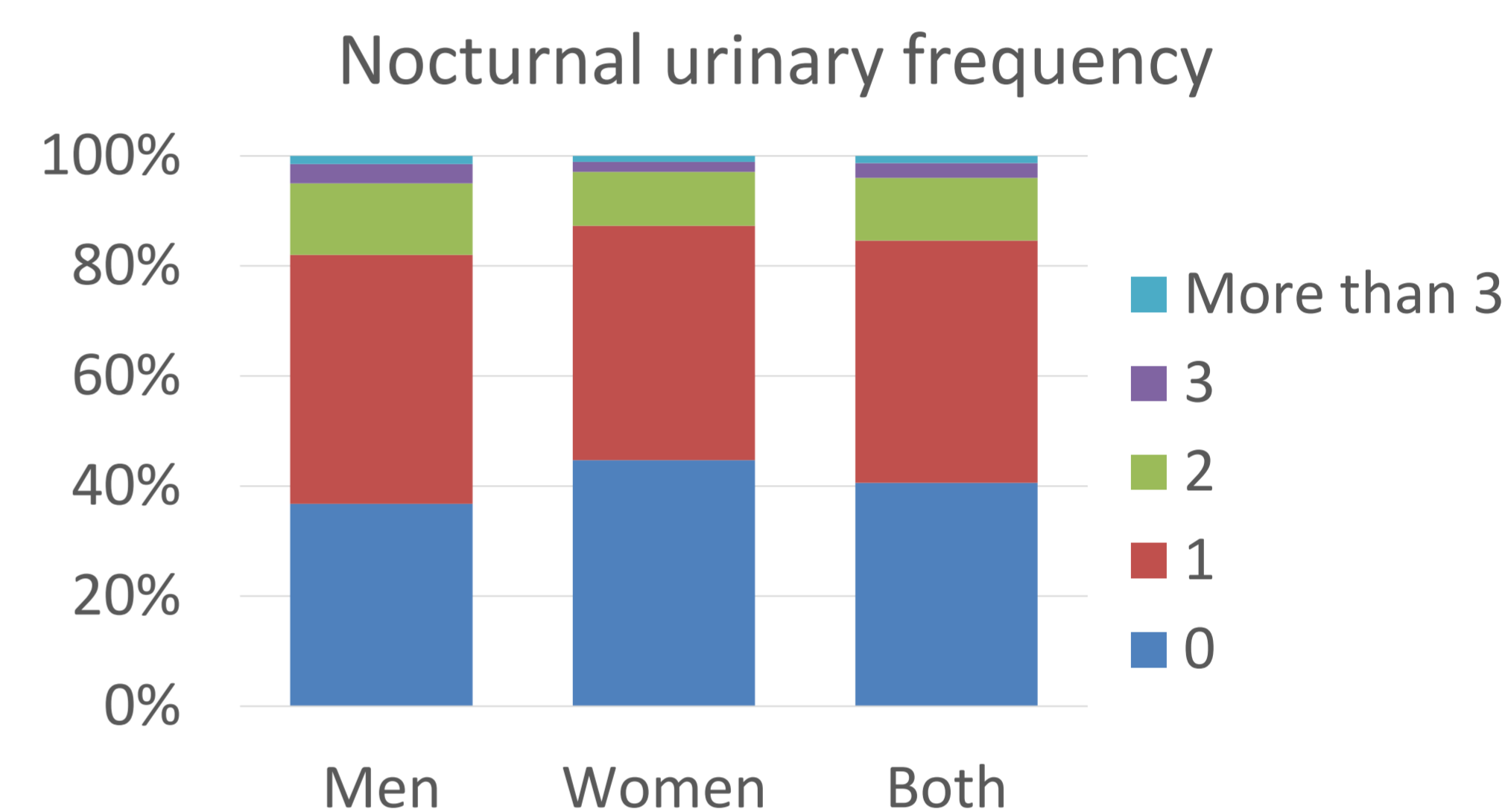
Results: Correlation of attempts to good sleep and nocturnal urinary frequency

	Spearman's rho	P value
Drinking alcohol	-0.1247	<0.001
Drinking tea or other sleep-inducing drinks	-0.0813	<0.001
Going to the bathroom before bedtime	-0.0608	<0.001
Going to bed at a fixed time as much as possible	-0.0569	<0.001
Not drinking too much water	-0.0562	<0.01
Getting moderate exercise during the day	-0.0543	<0.01
Not looking at a smartphone after entering the bed	-0.0429	0.014
Taking a bath	-0.0256	0.141
Using good bedding	-0.0253	0.145
Dimming room lights	-0.0237	0.174

Results: Association between attempts to good sleep and nocturia

	Nocturnal urinary frequency		Adjusted odds ratio	
	≥2 (n=511)	<2 (n=2806)		
	n (%)	n (%)	OR (95% CI)	P value
Drinking tea or other sleep-inducing drinks	103 (20.1)	351 (12.5)	**1.70 (1.31-2.21)**	<0.001
Not drinking too much water	144 (28.2)	572 (20.4)	**1.48 (1.18-1.87)**	<0.001
Drinking alcohol	174 (34.1)	683 (24.3)	**1.46 (1.18-1.81)**	<0.001
Using good bedding	181 (35.4)	1046 (37.3)	**0.74 (0.60-0.92)**	<0.001

Adjustment for age, gender, and attempts to good sleep in multivariable logistic regression analysis

Men

	Nocturnal urinary frequency		Adjusted odds ratio	
	≥2 (n=307)	<2 (n=1400)		
	n (%)	n (%)	OR (95% CI)	P value
Drinking tea or other sleep-inducing drinks	56 (25.8)	161 (11.5)	1.74 (1.21-2.49)	<0.01
Not drinking too much water	77 (25.1)	229 (16.4)	1.59 (1.15-2.19)	<0.01
Drinking alcohol	122 (39.7)	683 (31.3)	1.43 (1.10-1.86)	<0.01
Using good bedding	95 (30.9)	486 (34.7)	0.67 (0.50-0.90)	<0.01

Adjustment for age, and attempts to good sleep in multivariable logistic regression analysis

Women

	Nocturnal urinary frequency		Adjusted odds ratio	
	≥2 (n=204)	<2 (n=1406)		
	n (%)	n (%)	OR (95% CI)	P value
Drinking tea or other sleep-inducing drinks	47 (23.0)	190 (13.5)	1.66 (1.13-2.45)	<0.01
Drinking alcohol	52 (25.5)	244 (17.4)	1.47 (1.03-2.10)	0.036

Adjustment for age, and attempts to good sleep in multivariable logistic regression analysis

LIMITATIONS:

Selection bias among survey participants: 1. Limited to individuals with internet access. 2. Limited to individuals who participate in online surveys. 3. Tendency for those with an interest in sleep to participate.

Considerations: 1. High anonymity, leading to the risk of intentionally providing false information. 2. Uncertainty regarding the actual extent of adherence to stated practices. 3. Lack of clinical information for background factors.

CONCLUSIONS:

Lifestyle habits considered unsuitable for nocturia "Drinking tea or other sleep-inducing drinks" and unsuitable not only for nocturia but also for sleep quality "Drinking alcohol" were significantly more common in the general population with nocturia in both men and women. These results can provide valuable information on what aspects of education should be focused on for the general population with sleep problems and nocturia.

COI: Nothing to disclose.