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IS URINARY INCONTINENCE ASSOCIATED WITH DECREASED SEXUAL ACTIVITY IN OLDER WOMEN?

Hypothesis / aims of study

A number of studies have addressed urinary incontinence (UI) and sexuality separately in older post-menopausal women, but few have examined whether UI is directly or indirectly associated with sexual activity in this population. The objective of this research was to study the association between age, UI, sexual activity and health status in older community-dwelling women. The main hypothesis was that the presence of UI would be directly associated with sexual activity, and that the magnitude of this association would increase with severity of UI. An alternative hypothesis was that UI would be indirectly associated with sexual activity, with its effects mediated by physical and mental health status or age.

Study design, materials and methods

A cross-sectional postal survey of 5,000 Canadian community-dwelling women aged 55 years and older from 10 Canadian provinces was conducted in October 2003. The sampling frame consisted of all households across Canada whose addresses were registered with Canada Post. Women who responded to two household level Canada Post surveys during the year 2002 made up the study list sample (this represented a 15-18% response rate from all households surveyed). 5,000 names and addresses were randomly generated from this list to receive the study questionnaire. In the questionnaire women were queried on current sexual activity, body image, age, and marital status. UI was assessed using the International Consultation on Incontinence Questionnaire (ICI-Q) which measured UI severity (frequency and amount), UI impact on everyday life, and type of UI. Physical and mental health status was measured using the Measuring Outcomes Short-Form Health Survey (SF-12). Differences among incontinent and continent respondents were evaluated with t-tests for continuous variables and chi-square tests for categorical variables. Logistic regression analyses were used to test the extent to which sexual activity was associated with UI, while controlling for health status, age and severity of UI.

Results

The response rate was 50% (2484 women, mean age 71 $\pm$ 7, range 55-95). Forty-seven percent of respondents experienced UI, and 27% reported being sexually active. Characteristics of women with UI versus those without UI are reported in Table 1.

Table 1: Characteristics of respondents with and without UI

Characteristics	Incontinent women n=1163	Continent women n=1301	p-value
Age (mean $\pm$ SD)	72 $\pm$ 7	71 $\pm$ 7	0.04
Sexually active (%)	25%	30%	0.003
Good body image (%)	56%	70%	<0.0001
Married	59%	58%	0.5
% reporting fair or poor health status[+]	19%	13%	<0.0001
Physical health score (mean $\pm$ SD)*	42 $\pm$ 11	46 $\pm$ 11	<0.0001
Mental health score (mean $\pm$ SD)*	51 $\pm$ 10	54 $\pm$ 9	<0.0001
Frequency of UI At least once per day (%)	 40%	-	-
Amount of leakage per episode UI Moderate or large (%)	 14%	-	-
Type of UI UI with laugh, cough or sneeze (%) UI before getting to the bathroom (%) Both (%)	 33% 27% 30%	-	-

[+] As opposed to good, very good or excellent health

[*] Lowest and highest possible SF-12 physical and mental health scores are set at 0 and 100.

In univariate regression analysis, women with UI were significantly less likely to be sexually active than women who were continent. However, UI no longer remained independently associated with sexual activity in analyses adjusted for physical health status (Table 2).

Table 2: Univariate and multivariate associations between UI and sexual activity

Variables	Odds of being sexually active (odds ratio)	95% Confidence Intervals
Presence of UI	0.75	0.63 - 0.91
Adjusted for age	0.79	0.65 – 0.96
Adjusted for physical health	0.85	0.70 – 1.03
Adjusted for mental health	0.78	0.65 – 0.95

Among incontinent women, amount of urine loss, but not frequency of urine loss, was associated with sexual activity, even when controlling for physical health status (adjusted OR 0.59, 95%CI 0.37-0.94). Neither symptoms suggestive of stress UI (UI while coughing, laughing or sneezing) nor urge UI (urine leakage before getting to the bathroom) were associated with sexual activity. However, women reporting nocturnal UI (only 3% of the sample), were significantly less likely to be sexually active (OR 0.23, 95%CI 0.0.09 – 0.58). Marital status was found to be the strongest predictor of sexual activity among incontinent women, even after adjusting for physical health status (adjusted OR 8.16, 95%CI 5.49-12.14). In this sample, age was strongly associated with sexual activity, but only weakly with UI status. Women aged 70 years and older were 60% less likely to be sexually active than women younger than age 70, even when adjusting for marital status and physical health status (adjusted OR 0.42, 95%CI 0.34-0.52). When controlling for physical health, age no longer remained independently associated with UI status.

Interpretation of results

The relationship between sexual activity and UI appears to be mediated by physical health status in this sample of relatively healthy older community-dwelling women. Neither frequency of UI, nor type of UI, was associated with sexual activity. Amount of urine loss and nocturnal UI, however, were independently associated with sexual activity even when accounting for health status. Marital status and age are stronger predictors of sexual activity than UI in older women.

The generalizability of these findings is limited to cognitively intact, relatively healthy women who chose to answer the postal survey. The women who responded to this survey were slightly healthier than the average Canadian woman aged 65 years or older. Due to sampling and response bias, frail or bed-bound women likely would not have been captured in this survey. The diagnosis of type of UI is limited by the availability of questions in the ICI-Q. Data is lacking on occurrence of UI during sexual activity. There were <5% missing data, and women with missing data were excluded from this analysis.

Concluding message

Sexual activity is predominantly associated with marital status, age and physical health status, but not UI, in older community-dwelling women. In this large cross-national sample of older Canadian women, there was no direct relationship between UI and sexual activity. However, an indirect relationship existed between UI and sexual activity, and this was accounted for by diminished physical health status. Caution should be exercised in interpreting research studies looking at the effect of UI on sexual activity in older women if physical health status is not accounted for as a possible explanatory variable in the analyses.

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