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ARE SEXUAL ACTIVITY AND SATISFACTION IMPACTED BY PELVIC FLOOR DISORDERS? ANALYSIS OF A COMMUNITY BASED SURVEY.

Hypothesis / aims of study
The aims of this study were to assess sexual activity and satisfaction in a large, multiethnic, managed care population of women with and without pelvic floor disorders (PFDs). The hypothesis tested was that the presence of PFDs would significantly impair sexual activity and satisfaction in those women who had a sexual partner.

Study design, materials and methods
The Epidemiology of Prolapse and Incontinence Questionnaire [1] (EPIQ) identified women with pelvic organ prolapse (POP), stress urinary incontinence (SUI), overactive bladder (OAB) and anal incontinence (AI) among the 4,458 respondents in a previously reported study.[2] Demographic, socioeconomic, and medical history were also obtained. Information about sexual activity was obtained by asking the question “Are you having sexual relations at this time in your life” and sexual satisfaction was measured using a 100 mm visual analog scale. Women without a sex partner were excluded from analysis. Conditions potentially associated with sexual activity included age, race, marital status, history of depression, diabetes and neurologic disease, obesity, dyspareunia, prolapse symptoms or ‘no desire’ were also explored. Prevalence rates of sexual activity were compared for women with and without each of the PFDs using chi-square tests, and mean satisfaction scores were compared using T-tests. Logistic and linear regression was used to assess the relative impact of each PFD on activity and satisfaction while controlling for confounding variables. Associations at $p < 0.05$ were considered significant.

Results
Of the 4,458 respondents, 92% (4,106) responded to the sexual activity questions and 64% (2,620) reported having a partner. Of the women with a partner, 86% reported being sexually active. Univariate analysis suggested that women with OAB, POP, AI or any one or more PFD were less likely to be sexually active (Table 1). However, individual or cumulative PFDs were no longer significant after controlling for significant confounding variables (age, marital status, depression, neurologic disease, diabetes, obesity, menopause, and no desire; all $p < 0.05$). Significant contributors to sexual activity included only age (OR = 0.94, 0.93 - 0.96), being divorced (OR = 3.37, 1.16 - 9.81), menopause (OR = 0.40, 0.22 - 0.75), neurologic disease (OR = 0.47, 0.22 - 0.99) and no desire (OR = 0.16, 0.11 - 0.21). As shown in Table 2, sexual satisfaction was significantly lower in patients with SUI, POP, AI and any one or more PFD compared to unaffected women. However, in linear regression models, sexual satisfaction was only significantly affected by being divorced (+8.5 mm, $p = 0.003$), menopausal (-10.3 mm, $p < 0.001$), and having no desire (-30.7 mm, $p < 0.001$), or dyspareunia (-11.2 mm, $p < 0.001$). Post hoc power analysis demonstrates 96% and 99% power to detect differences between rates of activity and satisfaction respectively.

Table 1. Rates of sexual activity as a function of PFD.

	PFD Present	PFD Absent	*P* value
SUI	328 (84%)	1911 (87%)	.10
OAB	236 (78%)	1989 (87%)	<.0001
POP	129 (81%)	2106 (87%)	<.05
AI	495 (81%)	1708 (87%)	<.0001
Any PFD	743 (82%)	1434 (88%)	<.0001

Table 2. Rates of sexual satisfaction (mean) as a function of PFD.

	PFD Present	PFD Absent	*P* value
SUI	61.1 ± 32.0 mm	66.7 ± 29.0 mm	.002
OAB	62.5 ± 30.9 mm	66.3 ± 29.3 mm	.065
POP	57.7 ± 32.6 mm	66.4 ± 29.2 mm	.002
AI	61.4 ± 31.1 mm	67.1 ± 28.9 mm	<.001
Any PFD	62.3 ± 30.8 mm	67.9 ± 28.5 mm	<.001

Interpretation of results
In this cohort of community dwelling women enrolled in a managed health care plan, PFDs do not appear to significantly affect sexual activity or satisfaction when controlling for other confounding factors. Marital status, menopause, and lack of desire were the major determinants of sexual activity, while satisfaction was also affected by dyspareunia.

Concluding message
PFDs do not appear to independently affect sexual activity and satisfaction in this community based population.

[1] Int Urogynecol J Pelvic Floor Dysfunct. 2005 Jul-Aug;16(4):272-84. [2] Neurourology and Urodynamics, Vol 24, issue 5-6, pg 508.

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