

CORRELATION OF BLADDER AND SEXUAL FUNCTION IN WOMEN WITH NEUROLOGICAL DISABILITIES.

Aims of Study

The purpose of this study was twofold. First, to investigate sexual function, including arousal, orgasm, desire, and enjoyment, in a sample of women with neurological disorders, predominately multiple sclerosis. Second, to determine the extent that bladder dysfunction relates to these sexual issues.

Methods

133 women with neurological disorders (predominately multiple sclerosis) were asked to complete 3 anonymous questionnaires related to urinary and sexual function.

A demographic and medical history questionnaire elicited information regarding age, marital status, race, disability, menopausal status, current sexual partner, past bladder and pelvic surgery, depression, and history of unconsented sex. Urinary function was assessed by asking women to complete the Urogenital Distress Inventory-Short Form (UDI-6) (Uebersax, et al 1995). Sexual function was measured using the Personal Experience Questionnaire (PEQ)-Short Form. (Dennerstein, Lehert & Dudley, 2001). Instrument brevity was a major consideration given that we were surveying women with neurological disorders.

Means, standard deviations, and percentages were calculated to describe the sample with respect to demographic characteristics, medical history, and medication usage. Percentages were also calculated to describe the distribution of responses to the bladder and sexual function questionnaires. Multinomial logistic regression analyses were performed to collectively examine variables influencing sexual function. The independent variables introduced into the regression analyses were those identified from the Chi-square analyses as having at least a trend of association with the sexual function variables ($p < .10$).

Results

The mean age (\pm standard deviation) of the women was 48.31 ± 10.47 years with an age range of 20 to 77 years. Sixty-two percent of the sample were married and 80% indicated they had a current sexual partner. Ninety percent of the women were Caucasian, 5% were African American, and 5% comprised other racial categories (Asian, American Indian, Other). Eighty-five percent of the women indicated a problem with urine or bladder control. Urinary frequency, urgency, and leakage with physical activity were reported by 64%, 76%, and 65% of the women, respectively.

Seventy percent of the sample acknowledged that their neurological problems affected their sex life. However, over 70% of the women indicated that they enjoyed, felt aroused, and experienced orgasm with sexual activity. Seventy-two percent of the women reported some degree of dyspareunia. Women who were bothered sexually by their neurological problems had proportionally lower levels of arousal and orgasm, and enjoyed sexual activity less compared to women who were not bothered sexually by their neurological problems. We observed a statistically significant association between the UDI urge incontinence item and arousal ($X^2_{(2)} = 7.42, p < .05$). Also, the association between urge incontinence and the ability to achieve orgasm with sexual activity approached statistical significance ($X^2_{(2)} = 5.82, p = .055$). For women with urge incontinence, a higher than expected proportion experienced arousal and orgasm with sexual activity. Conversely, a lower than expected proportion of women without urge incontinence reported no or minimal ability to achieve arousal or orgasm with sexual activity. Based on the Chi-square analyses, the independent variables expected to impact sexual function included urge incontinence and the indication that neurological problems impaired sex. Collectively, the variables of depression, sexual partner, urge incontinence, neurological problems, and age added to the model to predict the ability for women to be aroused, achieve orgasm, and enjoy sexual activity.

Conclusions

In this pilot study of neurologically impaired women, 85% had some voiding symptoms and 70% believed that their neurological disease affected their sexual function. Despite these findings and contrary to other published studies, 70% of our participants still enjoyed, felt aroused, and could experience orgasm. We also found that patients with urge incontinence were more likely to experience sexual arousal than those who did not have urge incontinence. Additional studies need to be performed to investigate the possible neurological basis of this finding.

Multinomial Logistic Regression Results For Factors Associated With Enjoying Sex.

Enjoy Sex	Independent Variable	Coefficient	p value	Odds Ratio
Not At All	Age	.093	.05	1.10
	No Urge Incontinence	.413	.65	1.51
	Neurological Problem Impacts Sex	1.53	.07	4.6
	Has Sexual Partner	-2.65	.004	.07
	Depressed	1.49	.09	4.4
Sometimes	Age	-.03	.33	.97
	No Urge Incontinence	.38	.63	1.5
	Neurological Problem Impacts Sex	1.8	.003	6.0
	Has Sexual Partner	.72	.54	2.0
	Depressed	-1.14	.07	.319

Reference group, women who enjoy sex "very often"

Note: Model significant at the level of 0.05, -2 Log Likelihood = 127.82, $\chi^2 = 33.6$.

Multinomial Logistic Regression Results For Factors Associated With Orgasm.

Orgasm	Independent Variable	Coefficient	p value	Odds Ratio
Not At All	Age	-.007	.812	.99
	No Urge Incontinence	1.14	.110	3.1
	Neurological Problem Impacts Sex	1.70	.005	5.4
	Has Sexual Partner	-.57	.47	.57
	Depressed	.280	.64	1.3
Some	Age	.014	.60	1.0
	No Urge Incontinence	.393	.590	1.5
	Neurological Problem Impacts Sex	1.17	.02	3.2
	Has Sexual Partner	.650	.47	1.9
	Depressed	.51	.33	1.7

Reference group, women who experienced orgasm "very often"

Note: Model significant at the level of 0.05, -2 Log Likelihood = 176.30, $\chi^2 = 18.60$.

Multinomial Logistic Regression Results For Factors Associated With Arousal.

Arousal	Independent Variable	Coefficient	p value	Odds Ratio
Not At All	Age	.05	.22	1.1
	No Urge Incontinence	1.04	.22	2.8
	Neurological Problem Impacts Sex	.351	.64	1.4
	Has Sexual Partner	-2.29	.007	.10
	Depressed	.709	.36	2.0
Some	Age	-.01	.71	.99
	No Urge Incontinence	.82	.24	2.3
	Neurological Problem Impacts Sex	1.58	.006	4.8
	Has Sexual Partner	-.96	.23	.38
	Depressed	-.165	.76	.85

Reference group, women who experienced arousal "very often"

Note: Model significant at the level of 0.05, -2 Log Likelihood = 140.83, $\chi^2 = 22.56$.