

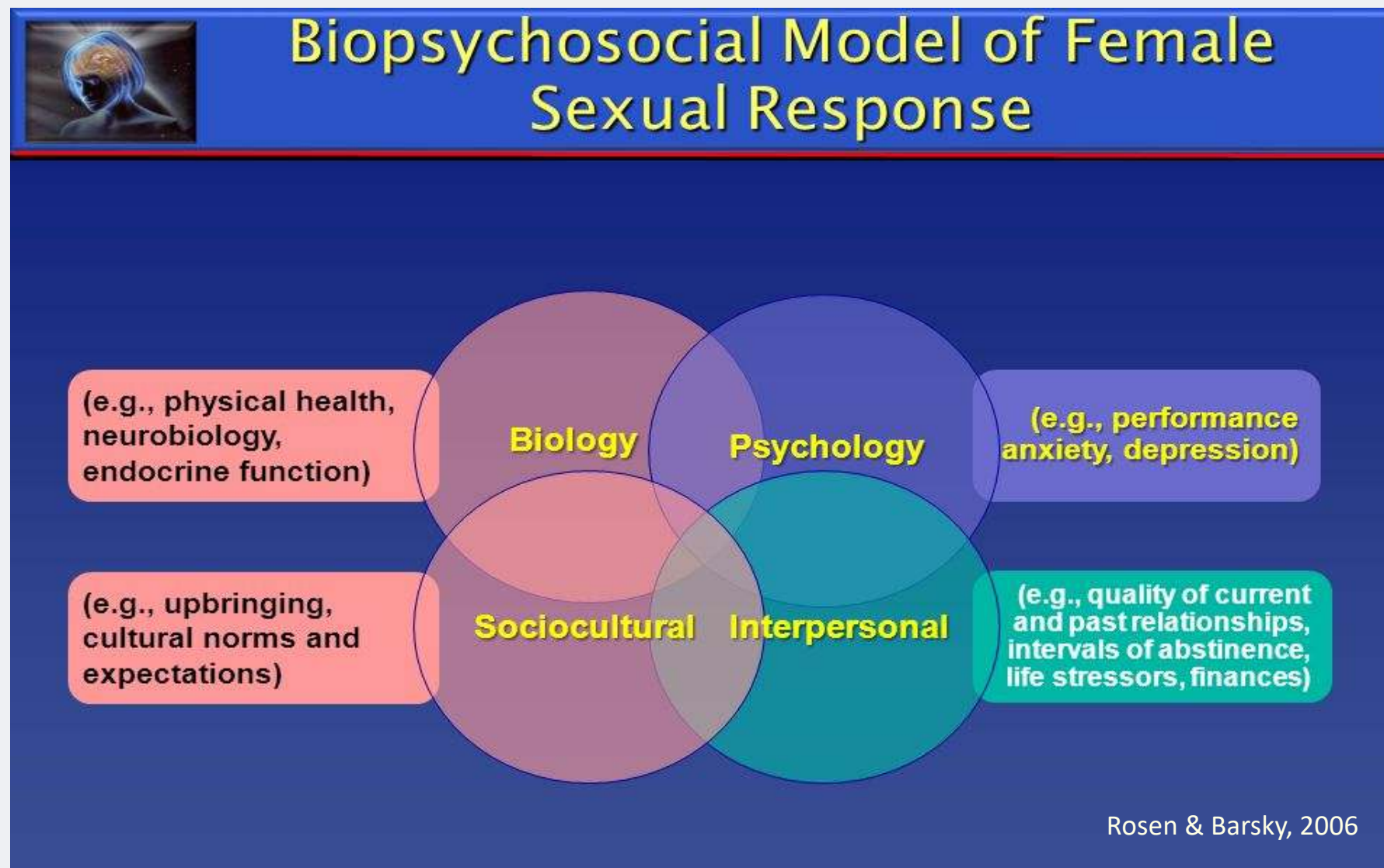
Impaired Sexual Quality of Life in Women with Neuromyelitis Optica Spectrum Disorder

Maureen A. Mealy¹, PhD(c), RN, Philippines Cabahug^{1,2}, MD, Michael Levy¹, MD, PhD

¹Johns Hopkins University School of Medicine, Baltimore, MD; ²Kennedy Krieger Institute, Baltimore, MD

Introduction

- Neuromyelitis optica spectrum disorder (NMOSD) is a relapsing autoimmune disease of the central nervous system that preferentially targets the optic nerves and spinal cord.
- NMOSD disproportionately affects women at a rate of 6.5-9 for every man.
- Sexual dysfunction is multifactorial, and is known to occur in those with spinal cord injury both due to direct damage and as a secondary consequence:
 - Direct: damage to the autonomic tracts in the spinal cord.
 - Indirect: secondary consequence of depression, pain and/or medications used for symptomatic management.
- The impact of sexual quality of life has never been explored in this population.



Methods

- We conducted an analysis of women with NMOSD from the Johns Hopkins NMO Clinic Facebook Group, and online patient community.
- All women diagnosed with NMOSD were eligible for participation, regardless of presence of sexual dysfunction.
- Data describing demographic and clinical data were obtained by patient report.
- Participants completed the Sexual Quality of Life-Female Questionnaire (SQOL-F), an 18-item assessment of the impact of sexual dysfunction on quality of life in women.
- These data were compared to normative healthy controls as well as data in traumatic spinal cord injury (SCI) using one-way ANOVA.

Results

Demographic and Clinical Characteristics		SQOL-F items			NMOSD	SCI [‡]	Normal [‡]
Patients <i>n</i>	182	1	When I think about my sexual life, it is an enjoyable part of my life overall.	3.5	3.8	5.0*	
Race		2	When I think about my sexual life, I feel frustrated.	2.6	3.0	4.6*	
• White or Caucasian Descent, (%)	136 (75)	3	When I think about my sexual life, I feel depressed.	3.1	3.6	5.3*	
• Black or African Descent, (%)	21 (12)	4	When I think about my sexual life, I feel like less of a woman.	3.1	3.8* ↑	5.6*	
• Latina or Hispanic Descent, (%)	15 (8)	5	When I think about my sexual life, I feel good about myself.	4.1	3.3* ↓	4.8*	
• Asian Descent, (%)	5 (3)	6	I have lost confidence in myself as a sexual partner.	2.7	3.6* ↑	5.4*	
• Native American, (%)	2 (1)	7	When I think about my sexual life, I feel anxious.	3.1	3.6	4.2*	
• More than one race, (%)	3 (2)	8	When I think about my sexual life, I feel angry.	3.3	3.8	5.6*	
Current age, mean years (SD)	44.6 (12.4)	9	When I think about my sexual life, I feel close to my partner.	3.5	3.6	5.1*	
Serostatus, (%)		10	I worry about the future of my sexual life.	1.9	3.0* ↑	4.6*	
• AQP-4 Ab positive	107 (59)	11	I have lost pleasure in sexual activity.	2.6	3.6* ↑	5.0*	
• AQP-4 Ab negative*	41 (22)	12	When I think about my sexual life, I am embarrassed.	3.0	3.6* ↑	5.5*	
• MOG Ab positive	5 (3)	13	When I think about my sexual life, I feel that I can talk to my partner about sexual matters.	4.2	4.0	4.8*	
• Unknown	29 (16)	14	I try to avoid sexual activity.	3.3	3.8	5.2*	
Duration of Disease, mean years (SD)	9.7 (1.0-25.7)	15	When I think about my sexual life, I feel guilty.	3.4	4.0* ↑	5.4*	
<small>*MOG Ab unknown</small>		16	When I think about my sexual life, I worry that my partner feels hurt or rejected.	3.0	3.3	5.0*	
<ul style="list-style-type: none"> Sexual quality of life was significantly worse in women with NMOSD for each construct of the SQOL-F compared to able-bodied women with normal sexual function ($p < 0.05$). Overall SQOL was significantly worse in women with NMOSD compared to women with SCI ($p < 0.05$). 		17	When I think about my sexual life, I feel like I have lost something	2.1	2.5	4.8*	
		18	When I think about my sexual life, I am satisfied with the frequency of sexual activity.	2.5	2.8	4.2*	
		Total mean score		55.1	62.7*	90.1*	
		<small>‡previously published data (Symonds et al., 2007); *$p < 0.05$</small>					

Discussion and Conclusions

- This is the first investigation into the impact of sexual dysfunction on quality of life in women with NMOSD.
- Sexual quality of life was found to be significantly worse in women with NMOSD compared to either women with SCI or able-bodied women.
- At the time of validation of the SQOL-F, this instrument was found to correlate with sexual symptoms including pain/discomfort, difficulty with arousal and lack of sexual interest.
- In multiple sclerosis, the SQOL-F was found to correlate with depressive symptoms (Beck Depression Inventory) and elements of sexual function to include desire, arousal, organismic functioning and overall sexual satisfaction.
- These data support the need for a more comprehensive, well-controlled evaluation of contributors to sexual dysfunction in NMOSD that includes an assessment of the impact of co-occurring symptoms such as pain, fatigue and mood.