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RACE/ETHNIC DIFFERENCES IN SYMPTOMS AND IMPACTS OF URINARY INCONTINENCE IN WOMEN UNDERGOING STRESS INCONTINENCE SURGERY

Hypothesis / aims of study

To investigate the association of race/ethnicity with objective and subjective indicators of female stress urinary incontinence (SUI)

Study design, materials and methods

Analysis is based on baseline data of 654 women participating in a randomized clinical trial of SUI surgery. Women were classified into 4 racial/ ethnic groups: Hispanic, White nonHispanic (WNH), Black nonHispanic (BNH) and other. Evaluations consisted of: sociodemographics including Nam-Powers occupational score, history and exam including body mass index (BMI), Pelvic Floor Muscle Strength (Brinks) and pelvic organ prolapse quantification (POPQ). Urodynamic studies (UDS) were performed using International Continence Society Guidelines. SUI severity was measured with 2 objective measures [weighted pad test & 3 day voiding diary] and 3 subjective measures [Medical, Epidemiologic & Social Aspects of Aging (MESA) Incontinence symptom questionnaire, Incontinence Impact Questionnaire (IIQ) & Urogenital Distress Inventory (UDI)]. Bivariate associations were computed with one-way ANOVA and Chi-Square and considered significant at $p \leq 0.01$ to account for multiple comparisons. Multivariable linear regression compared subjective severity (UDI) by ethnicity when controlling for sociodemographic factors.

Results

	Hispanic, n = 71 (10.9%)	Non-Hispanic White, n = 477 (73.5%)	Black, non- Hispanic, n = 44 (6.8%)	Other n = 57 (8.8%)	p-value
Socio-demographic characteristics:					
Age (yrs)	49.8 ± 9.1	52.5 ± 10.4	49.0 ± 10.2	51.3 ± 10.6	0.04
Education, ≤ HS/GED	37 (52)	147 (31)	17 (39)	21 (37)	0.004
Income					
<20,000/year	29 (45)	56 (13)	13 (32)	17 (33)	<0.0001
\$20,000 – 49,999	21 (32)	123 (28)	19 (47)	15 (29)	
\$50,000 – 79,000	10 (15)	105 (24)	3 (8)	7 (14)	
\$80,000+	5 (8)	156 (35)	5 (13)	12 (24)	
Namm Powers Occup score	49.3 ± 24.6	59.7 ± 23.7	48.4 ± 24.8	49.8 ± 27.3	<0.0001
BMI kg/m ² mean ±SD	30.8 ± 5.6	29.6 ± 5.9	34.4 ± 7.5	28.7 ± 5.9	<0.0001
Physical Examination:					
POP-Q Stage					
0-I	25 (35)	108 (23)	14 (32)	15 (26)	0.008
II	43 (60)	279 (58)	28 (64)	36 (62)	
III-IV	4 (5)	93 (19)	2 (4)	7 (12)	
Measures of Incontinence:					
UDI total	156.9 ± 52.8	147.2 ± 47.2	161.0 ± 49.4	167.3 ± 50.8	0.006
UDI - obstructive	26.6 ± 23.9	24.1 ± 21.3	21.6 ± 16.6	34.2 ± 23.4	0.006
UDI - irritative	49.8 ± 25.7	45.6 ± 24.8	58.3 ± 25.2	55.3 ± 25.0	0.0007
IIQ total	223.9 ± 100.6	160.8 ± 99.6	166.8 ± 94.7	200.7 ± 97.6	<0.0001
IIQ- activity	57.6 ± 27.1	43.4 ± 27.7	37.1 ± 26.3	52.2 ± 25.6	<0.0001
IIQ- travel	55.1 ± 29.1	36.0 ± 28.8	39.1 ± 27.6	47.3 ± 27.2	<0.0001
IIQ – social	52.0 ± 28.3	33.3 ± 25.7	36.4 ± 25.8	42.5 ± 28.1	<0.0001
IIQ - emotional	59.2 ± 27.5	48.0 ± 28.1	54.1 ± 25.9	58.7 ± 28.1	0.0011
Brinks' Score	8.8 ± 1.8	9.0 ± 2.1	9.6 ± 2.0	8.4 ± 2.3	0.04
Urodynamic Measures:					
Volume at MCC				352.7 ± 126.9	
	358.5 ± 104.8	404.5 ± 143.2	354.2 ± 115.6		0.0011
Volume voided from PFS				370.4 ± 129.8	
	367.1 ± 151.8	404.5 ± 165.9	342.6 ± 140.1		0.02

Interpretation of results

Racial/ethnic group differed sociodemographically. Hispanics had less education, lower household income and lower occupational scores. There were few ethnic differences in physical measures, i.e., BNH had higher BMIs and WNH were more likely to have stage 3-4 prolapse. Incontinence severity did not differ by race/ethnic group. Differences in

QoL and bother were seen: Hispanics reported greatest impact on QoL and WNH had the lowest symptom bother. The only differences on UDS were WNH women had the highest MCC and voided volume. In the multivariable model, race/ethnicity was not associated with subjective UI severity when controlling for education, income, occupational score, degree of prolapse, or BMI.

Concluding message

No race/ethnic differences in objective measures of SUI severity were observed in this SUI surgery cohort. When controlling for sociodemographic differences, there was no difference across groups in subjective measures of SUI severity suggesting that other factors may impact symptom reporting

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HUMAN SUBJECTS: This study was approved by the Local Ethics Committee, University of Texas Health Science Center and followed the Declaration of Helsinki Informed consent was obtained from the patients.