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## THE RELATIONSHIP BETWEEN SOCIOECONOMIC CLASS AND QUALITY OF LIFE IN WOMEN WITH AND WITHOUT PELVIC FLOOR DYSFUNCTION

### Hypothesis / Aims of study:

To evaluate and compare the relationship between socioeconomic class and general quality of life (QoL) in post menopausal Brazilian women with or without pelvic floor dysfunction (PFD).

### Study design / Materials and Methods:

The research was conducted in two referral hospitals in the state of Ceara, Brazil in the period from October 2011 to July 2013. The Ethics Committee of the local Hospitals approved the present study. Written informed consent was obtained from the patients. Only postmenopausal women were included in the study. Women who were taking hormone therapy in the last six months or who had non-inhibited contraction of the detrusor in urodynamic were excluded from the study. They were divided in two groups: with or without complaints of pelvic floor dysfunction (urinary incontinence and/or pelvic organ prolapse). The group of women without pelvic floor dysfunction was confirmed by clinical history and gynecological examination, all from the general gynecology outpatient clinic. Medical Outcomes Study 36-item short-form (SF-36), a generic QoL questionnaire, was applied to all women. Kings Health Questionnaire (KHQ) was applied to all women with urinary incontinence (UI) and prolapse quality of life questionnaire (P-QOL) was applied to all women with symptomatic and/or POP-Q > stage 2 pelvic organ prolapse (POP). The Criterion of Brazilian Economic Classification (CCEB) was used for the economic stratification of the population, according to schooling (according to school graduation) and possession of itens as television, car, bathroom, etc. This classification stratifies in classes from A to E, so that class A is the best social status and class E is the worst. Statistical analysis were performed with the *Statistical Package Social Science* (SPSS), version 20.0. Non-parametric Mann-Whitney U, Kruskal-Wallis H test and Spearman correlation coefficient were used to evaluate the statistical significance considering  $p < 0.05$ . Sample size calculation was performed to determine the number of women in each group and it was established that 94 women would be needed in each group to evaluate the quality of their lives.

### Results:

We evaluated 230 women with mean age of 56.2 years ( $\pm 9.4$  years): 136 with PFD and 94 without PFD. Women from this study belonged to classes B, C or D. There were no women from classes A or E. Comparing between groups with and without PFD, we found that most epidemiological variables were similar, except for body mass index and parity in class B, and for parity, vaginal delivery and age in classes C and D. Scores of almost all SF-36 domains were statistically different between groups with and without PFD. Therefore women with PFD have a worse general QoL than those without it. However, comparing women with and without PFD in each socioeconomic class, we found different results, statistically significant ( $p < 0.05$ ). Women from class B with PFD had worse SF-36 scores in five domains: functional capacity, physical limitation, pain, general health status and emotional aspects (Table 1). Women from class C with PFD had worse SF-36 scores in all eight domains (Table 2). Women from class D with PFD had worse SF-36 scores in only one domain: functional capacity (Table 3). Comparing women in PFD group with UI in each socioeconomic class using the KHQ, we only found difference statistically significant in domain of sleep and energy ( $p=0.01$ ) (Table 4). Comparing women in PFD group with POP in each socioeconomic class using the P- QOI, we only found difference statistically significant in domain of physical limitation ( $p=0.01$ ) (Table 5).

### Interpretation of Results:

Brazil is a country of many contrasts and extreme social inequality. The division into social classes by CCEB distinguishes not only the ability to buy goods but also the degree of education. Many evidences demonstrate that in lower classes there are higher mortality and morbidity. The most frequent explanations for this relationship include poor housing (slums), unemployment, poor diet, unhealthy work, low educational level and salary. Lack of access to material goods, which is showed in the CCEB has strong associations with the women concept of health and wellness, and the impact of these pathologies in their QoL. It may influence how post menopausal Brazilian women with PFD recognizes the severity of these symptoms and how it can change your concept of well-being and QoL, both overall, as specifically related to POP and UI. This way, women in class B and C, with PFD, has a greater impact in general QoL than the class D when compared with women without PFD in each class. However when we use specific QoL questionnaire to evaluate in women with UI (KHQ) and POP (PQoL) questionnaires did not observe statistically significant differences between the social classes. These data suggest that the QoL, related to UI and POP, as measured by these questionnaires above is not altered by the economic stratification in postmenopausal population, according to schooling and material possessions.

### Concluding Message:

Women with PFD have a worse general QoL than those without. These results were similar in women from classes B and C. However, women from class D had little difference between groups. Stratifying women according to socioeconomic class, we found that life conditions have a great impact in their QoL, independently of the presence of PFD. However the social class does not seem to alter the specific QoL for UI or POP in Brazilian postmenopausal women.

Table 1: Analysis of SF-36 scores in women with and without PFD in Class B, C and D

SF36	Class B	Class C	Class D
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	PFD	Contro l	p*	PFD	Contr ol	p*	PFD	Contr ol	p*
Functional Capacity	61.8 ± 25.7	88.0 ± 12.9	0.00	51.1 ± 22.8	76.8 ± 20.6	0.00	47.1 ± 26.9	71.4 ± 22.0	0.00
Physical limitation	39.0 ± 37.6	80.7 ± 32.6	0.00	27.6 ± 37.2	71.1 ± 37.2	0.00	37.5 ± 41.0	51.5 ± 42.5	0.13
Pain	46.8 ± 27.3	75.4 ± 25.3	0.00	44.0 ± 22.7	60.2 ± 22.6	0.00	53.2 ± 26.7	57.8 ± 24.5	0.34
General Health Status	55.3 ± 15.1	71.6 ± 23.1	0.00	46.9 ± 25.0	65.8 ± 25.3	0.00	57.1 ± 23.2	64.9 ± 23.4	0.19
Vitality	51.8 ± 26.7	66.9 ± 26.2	0.08	41.4 ± 21.8	62.7 ± 22.5	0.00	49.3 ± 23.1	57.6 ± 21.7	0.08
Social Aspects	63.5 ± 32.0	74.9 ± 26.5	0.28	57.8 ± 30.2	77.3 ± 26.2	0.00	67.3 ± 29.9	62.0 ± 30.7	0.87
Emotional Aspects	43.7 ± 48.2	79.5 ± 32.0	0.02	33.3 ± 39.5	76.8 ± 35.7	0.00	51.4 ± 45.3	57.2 ± 44.1	0.23
Mental health	63.5 ± 23.3	68.0 ± 28.2	0.50	54.2 ± 23.1	67.8 ± 18.9	0.00	53.5 ± 24.8	63.2 ± 24.5	0.13

\*Mann- Whitney U

Table 2: Analysis of KHQ scores in women with UI in Socioeconomic Classes

KHQ	CLASS B (n=14)	CLASS C (n=62)	CLASS D (n=36)	p*
How would you describe your health at the present?	56.2 ± 11.5	88.0 ± 12.9	64.7 ± 22.7	0.40
How much do you think your bladder problem affects your life?	83.0 ± 18.1	80.7 ± 32.6	81.7 ± 28.6	0.59
Role limitation	47.6 ± 30.0	75.4 ± 25.3	58.9 ± 33.9	0.57
Physical limitation	47.6 ± 30.0	71.6 ± 23.1	70.3 ± 31.6	0.29
Social limitation	20.6 ± 23.8	66.9 ± 26.2	37.7 ± 34.8	0.12
Personal relationships	26.6 ± 37.6	74.9 ± 26.5	51.4 ± 36.4	0.11
Emotions	5.90 ± 31.6	79.5 ± 32.0	68.6 ± 30.3	0.05
Sleepy/Energy	29.0 ± 26.3	50.7 ± 34.7	60.9 ± 31.8	<b>0.01</b>
UI symptoms	56.7 ± 16.3	48.5 ± 25.7	53.5 ± 24.9	0.57

\* Kruskal- Wallis H

Table 3: Analysis of PQoL scores in women with POP in Socioeconomic Classes

P QoI	CLASS B (n=8)	CLASS C (n=44)	CLASS D (n=33)	p*
How would you describe your health at the present?	50.0 ± 14.3	51.0 ± 18.7	63.8 ± 26.0	0.40
How much do you think your bladder problem affects your life?	52.3 ± 46.5	61.7 ± 39.7	81.4 ± 26.1	0.12
Role limitation	40.4 ± 38.3	47.9 ± 40.6	50.4 ± 33.8	0.23
Physical limitation	23.8 ± 25.2	40.2 ± 39.5	63.2 ± 33.0	<b>0.01</b>
Social limitation	18.2 ± 19.9	28.2 ± 30.7	39.4 ± 38.5	0.64
Personal relationships	42.8 ± 53.4	29.8 ± 36.4	47.1 ± 32.4	0.22
Emotions	55.5 ± 34.5	52.0 ± 32.3	70.9 ± 28.0	0.86
Sleepy/Energy	23.7 ± 26.9	30.5 ± 30.9	49.0 ± 33.5	0.30
POP symptoms	40.4 ± 38.6	30.8 ± 26.9	40.6 ± 24.3	0.42

\* Kruskal- Wallis H

#### Disclosures

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