

THE PREVALENCE AND CORRELATES OF SEXUAL FUNCTIONING IN WOMEN ON HEMODIALYSIS: A MULTINATIONAL, CROSS-SECTIONAL STUDY

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DIAPERUM

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Background

Sexual dysfunction may affect 80% of women with chronic kidney disease. However the specific patterns and clinical correlates of sexual functioning remain poorly described. The aim of this study was to assess prevalence and correlates of the individual domains of sexual functioning (desire, arousal, lubrication, orgasm, satisfaction, and pain) in women treated with hemodialysis.

Methods

We recruited, into this multinational cross-sectional study, women treated with long-term hemodialysis (Collaborative Working Group on Depression and Sexual dysfunction in Hemodialysis study). Self-reported domains of sexual functioning were assessed by the Female Sexual Function Index (FSFI) with lower scores representing lower sexual functioning. Socio-demographic and clinical correlates of each domain of sexual functioning were identified by stepwise multivariable linear regression. Sensitivity analyses were restricted to women who reported being sexually active.

Results

Of 1309 participants, 659 (50.3%) provided complete responses to FSFI survey questions and 35% reported being sexually active (Figure 1). Table 1 displays the baseline characteristics of the overall sample, survey respondents and incomplete respondents. Overall, most respondents reported either no sexual activity or low sexual functioning in all measured domains (orgasm 75.1%; arousal 64.0%; lubrication 63.3%; pain 60.7%; satisfaction 60.1%; sexual desire 58.0%, Figure 2). Respondents who were waitlisted for a kidney transplant reported scores with higher sexual functioning, while older respondents reported scores with lower functioning. The presence of depression was associated with worse lubrication and pain scores [mean difference for depressed versus non-depressed women (95% CI) -0.42 (-0.73 to -0.11), -0.53 (-0.89 to -0.16), respectively] while women who had experienced a previous cardiovascular event reported higher pain scores [-0.77 (-1.40 to -0.13)] (Table 2).

Figure 1 Flow chart showing details of the source population and participants in the study

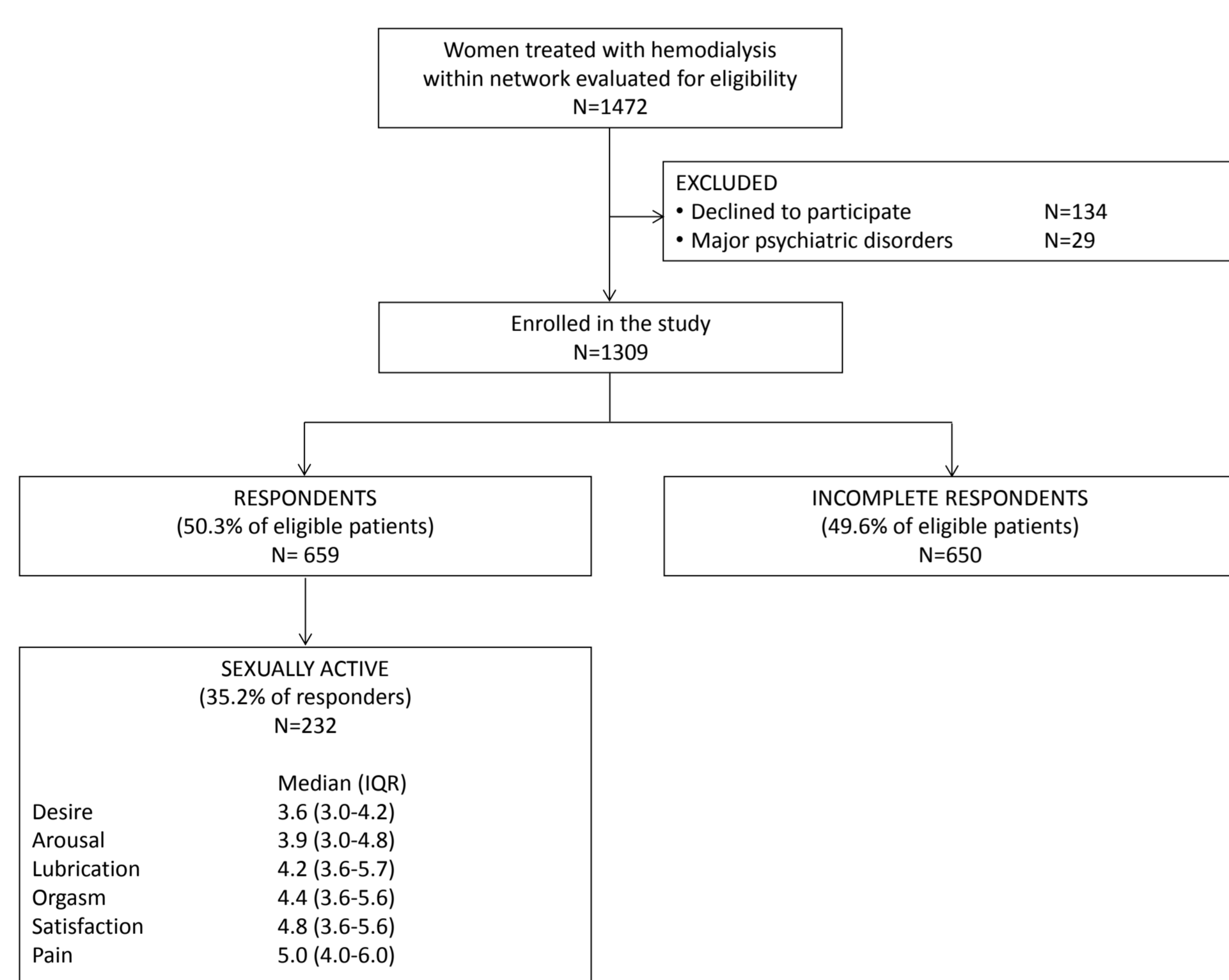


Table 1 Socio-demographic, clinical and dialysis related characteristics of women who responded and those who did not respond to FSFI questionnaire

Characteristic	Overall (n=1309)	Respondents (n=659)	Incomplete respondents (n=650)	P value*
Age (year)	62.8±15.4	58.8±15.3	66.8±14.5	<0.001
Highest school education, n (%)				0.30
≤5 years	605 (46.2)	304 (46.1)	301 (46.3)	
5-8 years	456 (34.8)	233 (35.4)	223 (34.3)	
>8 years	177 (13.6)	90 (13.6)	87 (13.4)	
Depression score (CES-D scale)	20.8±11.3	20.7±11.3	20.9±11.3	0.82
Location of dialysis clinic, n (%)				<0.001
Europe	1024 (78.2)	453 (68.7)	571 (87.8)	
South America	285 (21.8)	206 (31.3)	79 (12.2)	
Living without partner, n (%)	633 (49.3)	287 (44.2)	346 (54.6)	<0.001
Waiting list for kidney transplant, n (%)	159 (12.1)	104 (15.8)	55 (8.5)	<0.001
Occupational status, n (%)				0.002
Employed	106 (8.1)	60 (9.1)	46 (7.1)	
Unemployed	224 (17.1)	131 (19.9)	93 (14.3)	
Receiving pension	958 (73.2)	453 (68.7)	505 (77.7)	
Previously had children, n (%)	975 (74.5)	504 (76.5)	471 (72.5)	0.002
Menopause, n (%)	905 (69.1)	410 (62.2)	495 (76.2)	<0.001
Comorbid condition, n (%)				
Diabetes mellitus	295 (22.5)	144 (21.9)	151 (23.2)	0.65
Hypertension	786 (60.0)	402 (61.0)	384 (59.1)	0.78
Prior cardiovascular event†	103 (7.9)	49 (7.4)	54 (8.3)	0.56
Kidney transplant	35 (45.5)	25 (48.1)	10 (40.0)	0.51
Primary renal disease, n (%)				0.10
Diabetic nephropathy	189 (14.7)	111 (17.2)	78 (12.2)	
Hypertensive nephrosclerosis	287 (22.4)	137 (21.2)	150 (23.5)	
Other	808 (63.0)	398 (61.5)	410 (64.2)	
Current or former smoker, n (%)	223 (17)	151 (22.9)	72 (11.1)	<0.001
Clinical characteristics				
Interdialytic weight gain (kg)	2.1±0.9	2.0±0.9	2.1±0.9	0.02
Time on dialysis (months)	41.8 (18.3-76.8)	40.0 (17.0-77.7)	43.6 (20.3-75.4)	0.58
Single pool Kt/V	1.6±0.3	1.6±0.3	1.6±0.3	0.34
Systolic blood pressure (mmHg)	128.6±18.8	130.2±19.2	127.0±18.3	0.02
Hemoglobin (g/L)	10.9±1.3	10.9±1.3	10.9±1.3	0.68
Medication (%)				
Beta blocker	473 (36.1)	257 (39.0)	216 (33.2)	0.03
ACE inhibitor	383 (29.3)	217 (32.9)	166 (25.5)	0.003
Angiotensin receptor blocker	156 (11.9)	89 (13.5)	67 (10.3)	0.07
Antidepressant	86 (6.6)	42 (6.4)	44 (6.8)	0.77
Antipsychotic	42 (3.2)	14 (2.1)	28 (4.3)	0.03
Anxiolytic	241 (18.4)	153 (23.2)	88 (13.5)	<0.001

Data expressed with a plus/minus sign were mean ± SD. Medians were expressed with interquartile range. Numbers may not sum to group totals or percentages may not total 100% where data for the variable are missing. ACE, angiotensin-converting enzyme; CES-D, Center for Epidemiological Studies Depression; LDL, low density lipoprotein

*P value for comparison between who responded and those who did not respond to FSFI questionnaire

†Prior cardiovascular event included myocardial infarction, stroke or transient ischemic attack, or coronary or other revascularization surgery as assessed by the treating physician

Figure 2 Prevalence of sexual problems in women who responded to the FSFI questionnaire (N=659)

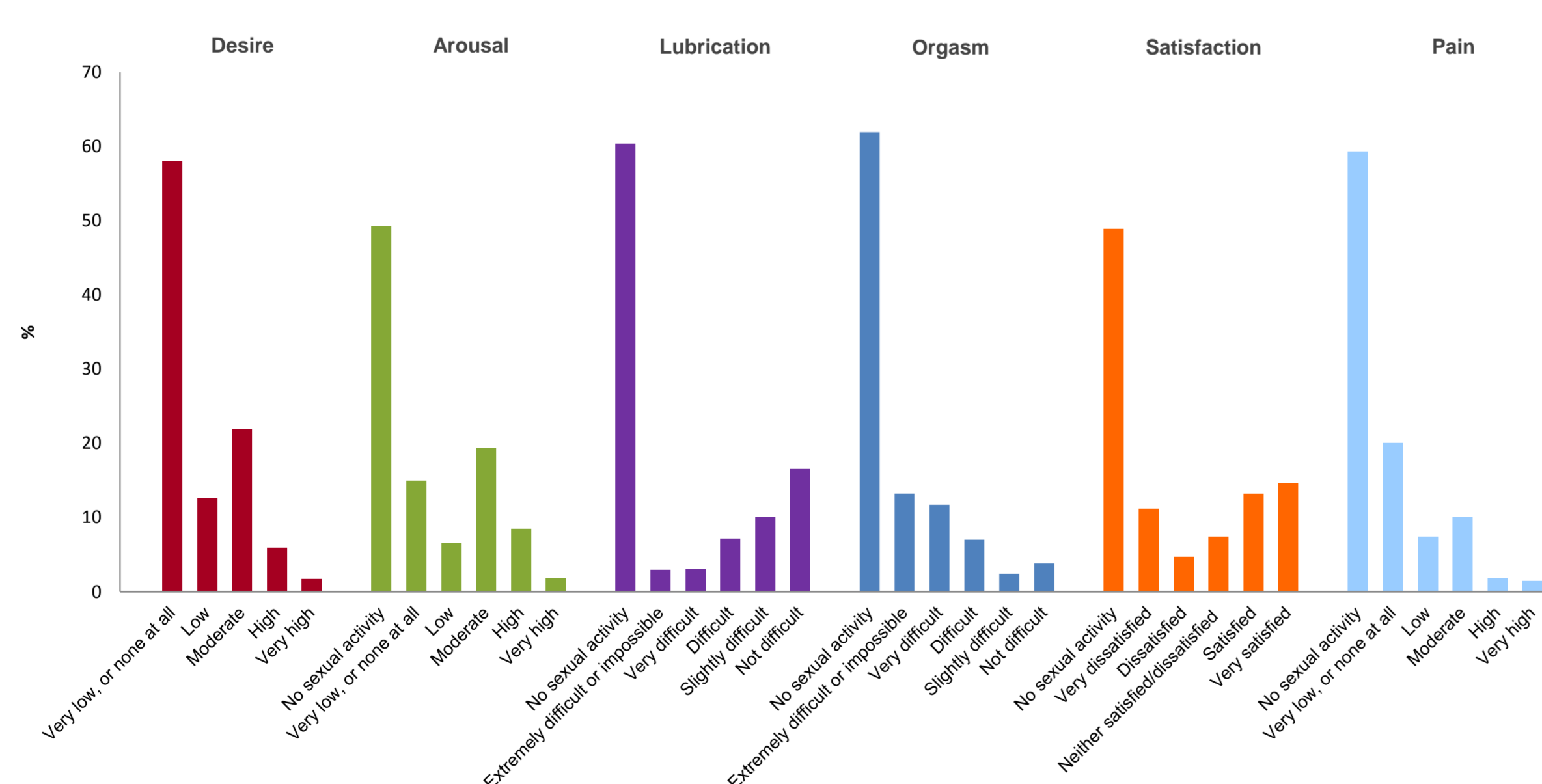


Table 2 Correlates of individual domains of the Female Sexual Function Index (N=659), displayed as multivariate adjusted mean difference*

Correlates	DESIRE	AROUSAL	LUBRICATION	ORGASM	SATISFACTION	PAIN
Age, per year increase	-0.05 (-0.05 to -0.04)	-0.05 (-0.06 to -0.05)	-0.07 (-0.08 to -0.05)	-0.06 (-0.07 to -0.05)	-0.05 (-0.06 to -0.04)	-0.06 (-0.08 to -0.05)
Wait list for transplant	0.45 (0.21 to 0.70)	0.73 (0.38 to 1.08)	0.71 (0.30 to 1.13)	0.75 (0.33 to 1.17)	0.58 (0.15 to 1.00)	0.86 (0.37 to 1.34)
Occupation						
Employed	-	1.00	-	1.00	-	-
Retired	-	-0.49 (-0.93 to -0.04)	-	-0.63 (-1.17 to -0.09)	-	-
Unemployed	-	-0.11 (-0.58 to 0.36)	-	-0.20 (-0.77 to 0.36)	-	-
Depression (CESD score ≥18)	-	-	-0.42 (-0.73 to -0.11)	-	-	-0.53 (-0.89 to -0.16)
Prior cardiovascular event	-	-	-	-	-	-0.77 (-1.40 to -0.13)

Data expressed as mean change and 95% confidence interval.

*The multivariate model included age, depression symptoms (CES-D score ≥ 18), pregnancy, occupational and menopause status, experience of a prior cardiovascular event (including myocardial infarction, stroke or transient ischemic attack, or coronary or other revascularization surgery as assessed by the treating physician), neurologic conditions (spinal cord lesions, multiple sclerosis, Parkinson disease, or Alzheimer disease), previous kidney transplant, wait-listing for kidney transplant, anxiolytics medication, time on dialysis, mean arterial pressure and serum phosphorus

Conclusion

Women with end-stage kidney disease reported scores consistent with marked low sexual functioning, across a range of domains; the low functioning appeared to be associated with comorbidity. These data suggest further study of the impact of sexual dysfunction on patient well-being in the dialysis setting is warranted.

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