SEXUAL DYSFUNCTION IN FIRST-EPISODE SCHIZOPHRENIA SPECTRUM DISORDERS

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BACKGROUND

- **Sexual dysfunction (SD)** is common (25–80%) in chronic schizophrenia [1]
- SD is also common in patients with **first-episode schizophrenia spectrum disorders (FES)** [2]
- SD is associated with **progression** from **ultra-high risk** to FES [3]
- The associations between SD and clinical expression of FES remain unclear
- Little is known about **sex differences** in SD in patients with FES

AIMS AND HYPOTHESES

- To examine the **prevalence and correlates of SD** in patients with FES (n = 77) and their associations with biological sex
- Hypothesis 1: **SD** is associated with **increased illness severity, metabolic risk factors, and poor quality of life** in FES
- Hypothesis 2: There are important sex differences in SD and its associations with illness severity in patients with FES

METHODOLOGY

- Sexual functioning was examined using the **Arizona Sexual Experiences Scale (ASEX)**
- **Clinical measures** of interest included the duration of untreated psychosis, psychopathology, depressive symptoms, functionality, and quality of life.
- **Biochemical testing** was also performed to measure prolactin, lipid profiles, and fasting glucose levels

RESULTS

- The overall **prevalence of SD** in our sample was 35% (n = 27)
- The prevalence of **SD** was significantly **higher among females** (n = 12; 57%) than males (n = 15; 27%) (p = 0.027)
- Females also had a **higher body mass index**, more severe **depressive symptoms** (CDSS), and **worse SD across multiple ASEX domains** compared to males, adjusting for the extent of antipsychotic exposure

RESULTS

- Patients with SD were younger, had more severe disorganized psychopathology, lower HDL cholesterol, more pronounced depressive symptoms, and poorer quality of life (Table 1)
- In a logistic regression model, **higher depression scores** (CDSS), **poorer social and occupational functioning**, and **low HDL cholesterol** were significant predictors of SD (Table 2)
- Linear regression models identified **female sex, poorer quality of life, and global psychopathology** as predictors of domain-specific SD (Table 3)

Characteristics	Sexual dysfunction, yes (n = 27)	Sexual dysfunction, no (n = 50)	Test statistic	P
Age. mean (SD)	23.0 (6.5)	26.2 (6.9)	F = 4.05	0.048*
Sex, female (%)	12 (44%)	9 (16%)	$X^2 = 4.92$	0.027*
DUP (weeks) (log), mean (SD)	2.66 (1.16)	3.04 (1.25)	F = 1.68	0.199
Illicit substance use, yes (%)	11 (41%)	18 (36%)	$X^2 = 0.15$	0.702
Tobacco use, yes (%)	14 (52%)	26 (52%)	$X^2 = 0.00$	1.00
Total AP dose, median (IQR)	1092 (1858)	926 (1906)	F = 0.44	0.510
CGI score, mean (SD)	3.7 (1.5)	3.3 (1.4)	F = 3.00	0.088
PANSS Total scores, mean (SD)	70.2 (27.3)	64.8 (23.6)	F = 1.68	0.199
PANSS Positive symptom domain, mean (SD)	11.7 (6.3)	10.8 (6.7)	F = 0.69	0.409
PANSS Negative symptom domain, mean (SD)	16.2 (7.8)	15.6 (5.9)	F = 0.15	0.703
PANSS Disorganised symptom domain, mean (SD)	9.7 (4.0)	8.2 (3.4)	F = 4.86	0.031*
CDSS score, mean (SD)	3.3 (4.2)	1.6 (3.3)	F = 4.86	0.038*
SOFAS score, mean (SD)	52.0 (15.5)	58.0 (14.0)	F = 4.29	0.042*
WHO-QoL domain 1 score, mean (SD)	14.5 (4.9)	14.6 (5.6)	F = 0.01	0.966
WHO-QoL domain 2 score, mean (SD)	13.7 (3.7)	15.2 (4.7)	F = 3.03	0.086
WHO-QoL domain 3, mean (SD)	11.9 (4.1)	13.1 (3.7)	F = 1.65	0.203
WHO-QoL domain 4, mean (SD)	14.9 (6.0)	16.4 (8.2)	F = 1.59	0.211
BMI, mean (SD)	23.6 (5.9)	23.6 (4.4)	F = 0.01	0.973
Triglycerides, mean (SD)	0.93 (0.71)	1.09 (0.58)	F = 1.02	0.315
Total cholesterol, mean (SD)	4.13 (1.07)	4.32 (1.00)	F = 0.60	0.442
LDL cholesterol, mean (SD)	2.70 (0.94)	2.70 (0.92)	F = 0.01	0.972
HDL cholesterol, mean (SD)	0.93 (0.25)	1.03 (0.27)	F = 5.74	0.019*
Prolactin (log), mean (SD)	2.37 (0.73)	2.36 (0.77)	F = 0.70	0.405

Table 2. Logistic regression model outputs showing the significant predictors of SD.

DV = sexual dysfunction (yes)

AIC = 88.26

log-likelihood= -34.0, McFadden's R^2 = 0.39, p<0.001

Predictor	Beta-coefficient	OR (95% CI)	P-value
CDSS score	0.23	1.26 (1.07–1.44)	0.010*
SOFAS score	-0.08	0.93 (0.87–0.98)	0.011*
HDL cholesterol	-4.23	0.01 (0.010–0.08)	0.003*

Table 3. Linear regression outputs showing the effects of biological sex, quality of life, and psychopathology as predictors of SD.

DV: ASEX domain 1(libido)			
F(4,72) = 5.00, R^2 = 0.22, p <0.001			
Predictor	Beta-coefficient	T-value	P-value
Sex (female)	1.28	3.63	0.0001
WHO-QoL-Bref domain 4	-0.67	-2.07	0.0425
DV: ASEX domain 2 (arousal)			
F(3,73) = 2.98, R^2 = 0.11, p <0.001			
Predictor	Beta-coefficient	T-value	P-value
Sex (female)	0.85	2.36	0.0211
DV: ASEX domain 3			
F(3,73) = 2.04, R^2 = 0.08, p = 0.010			
Predictor	Beta-coefficient	T-value	P-value
WHO-QoL-Bref domain 2	-0.12	-2.42	0.0180
DV: ASEX domain 4			
F(5,71) = 9.59, R^2 = 0.40, p <0.001			
Predictor	Beta-coefficient	T-value	P-value
Sex (female)	1.17	3.78	0.0001
PANSS Total score	0.02	3.06	0.0031
WHO-QoL-Bref domain 4	-0.10	-3.49	0.0001
DV: ASEX domain 5			
F(4,72) = 4.07, R^2 = 0.18, p = 0.005			
Predictor	Beta-coefficient	T-value	P-value
Sex (female)	0.85	2.26	0.0271
WHO-QoL-Bref domain 3	-0.13	-2.94	0.0044

DISCUSSION

- We found a **high prevalence of SD in FES** (35%) comparable to that described in prior studies [2]
- **Sex differences** in SD and depression scores were found, with further evidence for **sex-specific associations** between patient characteristics of SD
- Interventions aimed at reducing SD should be considered in **female patients** in particular, with emphasis on addressing symptoms of **depression**
- **Treatment interventions which target SD** could help improve outcomes and quality of life
- Future **prospective studies** are needed to examine both **sex and gender** differences in SD, and changes in specific domains of sexual functioning

CONCLUSION

- SD is **highly prevalent** in patients with FES
- SD is associated with **psychopathology severity, depressive symptoms, and quality of life**, largely independent of the degree of antipsychotic exposure
- Important **sex differences** in SD were also evident