

## Gender Differences in Sexual Dysfunction of Patients with Schizophrenia

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### Abstract:

The prevalence of sexual dysfunction in patients with schizophrenia ranged from 50 to 85%. One hundred outpatients with schizophrenia had participated in this study. All these patients had remission criteria. We used sociodemographic and clinical characteristics from medical files and we passed to our patients PANSS and ASEX. Comparison was between female and male groups. Sexual dysfunction was present in 55% of patients with schizophrenia. Women had higher total ASEX score than men especially in Arousal disorders and orgasm. There was a relationship between the ASEX total score and dose of treatment and with the severity of symptoms.

**Key Words:** sexual dysfunction; Schizophrenia

### Background:

Schizophrenia is a chronic and disabling mental illness of the young. It has a pronounced impact on the sexual abilities of patients. In the literature, the prevalence of sexual dysfunction in these patients ranged from 50 to 85% [1-3]. Many factors can explain this high prevalence such as hyperprolactinemia, sedation and antagonism of neurotransmitter receptors induced by antipsychotic drugs [4,5].

These sexual dysfunctions can affect their quality of life, self-esteem, attitude toward taking medication and compliance during therapy [5].

Detecting and treating this problem could improve the course and the quality of life of patients with schizophrenia.

This study aimed to assess the prevalence of sexual dysfunction in patients with schizophrenia and to investigate associated gender factors.

### Methods

This study was approved by the ethics committee of the Faculty of Medicine in Sousse. We have performed this study with one hundred first outpatients with a diagnosis of schizophrenia (DSM-IV TR criteria) from the outpatient psychiatric service of Farhat Hached Hospital in Sousse. All these patients met remission criteria of "The Remission in schizophrenia Working Group" with Positive and Negative Syndrome Scale score < 90 and without any admission in psychiatry since the past 6 months [6].

We administered to our patients a record exploring the sociodemographic and clinical characteristics, the Positive and Negative Syndrome Scale (PANSS) [7] and Arizona Sexual Experience

Scale (ASEX) to assess sexual dysfunction. ASEX scale was translated and validated into Arabic language [8]. Arabic version of ASEX had good internal consistency ( $\alpha=0.82$ ) and excellent reliability ( $r=0.92$ ,  $p<10^{-3}$ ) [8].

The ASEX scale is commonly used to evaluate sexual dysfunction scales in patients with mental disorders. It's a five-item rating scale that quantifies sex drive, arousal, vaginal lubrication/penile erection, ability to reach orgasm, and satisfaction from orgasm. Possible total scores range from 5 to 30, with the higher scores indicating more sexual dysfunction. The patient has sexual dysfunction when the ASEX total scores  $\geq 19$  or has an item with a score  $\geq 5$  or 3 items with a score  $\geq 4$  [8,9].

### Results

The mean age of our sample was  $37.6 \pm 10.2$  years. 70% were male, 57% were single and 73% were unemployed.

The mean age of onset illness was  $24.8 \pm 6.1$  years. Undifferentiated schizophrenia subtype was the most prevalent (58%). The mean PANSS score was  $51.8 \pm 12.8$ .

43% of this patient has received second generation antipsychotics and the average of Chlorpromazine equivalent dose was  $279 \pm 475$  mg/day.

The mean ASEX total score was  $17.7 \pm 5.6$ . Sexual dysfunction was present in 55% of patients with schizophrenia (total score  $\geq 19$  or ASEX Item  $\geq 5$  or  $\geq 3$  items with a score  $\geq 4$ ).

The two gender groups was comparable regarding age, age of onset, years of onset of schizophrenia, the mean PANSS score and dose of treatment.

Women had higher total ASEX score than men ( $20.8 \pm 5.9$  vs  $16.6 \pm 5$ ;  $p = 0.002$ ). Scores of arousal disorders, vaginal lubrication, orgasm and sexual satisfaction were higher in women than men ( $p$  respectively was 0.005, 0.005, 0.001 and 0.017) (table I).

	Men	Women	p
<b>ASEX 1: Sex drive</b>	$3.77 \pm 1.14$	$4.23 \pm 1.19$	0.071
<b>ASEX 2: Arousal</b>	$3.39 \pm 1.06$	$4.1 \pm 1.26$	<b>0.005</b>
<b>ASEX3: Penile erection/ Vaginal lubrication</b>	$3.46 \pm 1.21$	$4.23 \pm 1.33$	<b>0.005</b>
<b>ASEX4: Ability to reach orgasm</b>	$3.29 \pm 1.2$	$4.32 \pm 1.32$	<b>0.001</b>
<b>ASEX5: Satisfaction from orgasm</b>	$3.27 \pm 1.2$	$4.05 \pm 1.46$	<b>0.017</b>
<b>ASEX total score</b>	$16.63 \pm 5.06$	$20.82 \pm 5.96$	<b>0.002</b>

**Table I:** Sexual dysfunction between men and women

There was a relationship between the ASEX total score and dose of treatment ( $r = 0.36$ ,  $p = 0.001$ ) and with the severity of symptoms ( $r = 0.31$ ,  $p = 0.005$ ).

## Discussion

The prevalence of sexual dysfunction in patients with schizophrenia in our study was 55%. This result was similar to the literature with prevalence between 30 to 80% [1-3,8]. In a tunisian sample, Ben Mahmoud and al. found a frequency of 93% [9]. Many studies have shown that the sexuality of patients with schizophrenia is more impaired than general population [1-3,10,11].

In China's study using ASEX in patients with schizophrenia, sexual dysfunction was found in 61.9% of men's and 79.2% in women's [12]. The high rates and gender differences we observed are consistent with other studies [13,14]. According to Harley et al., women with schizophrenia experienced more problems in desire and men were more likely to report problems in arousal [15].

Ben Mahmoud had found a decrease in desire and arousal in women with schizophrenia [11]. Mclutia pointed the importance of the relational component, sentimental and emotional sexuality in women compared to men [16].

In Fujii's study, the most sexual dysfunctions in men were sexual desire, erectile dysfunction and ejaculation problem. It was sexual desire in women [17].

Literature data states that all sexual dysfunction can be observed in schizophrenia. They can be attributed to many factors such as the disease [18], the precarious social situation of patients, and the adverse effects of prescribed antipsychotic medications [1,19].

In our study, we found correlation between the severity of symptoms, particularly negative symptoms, and the severity of sexual dysfunction. It has been observed in many studies that cognitive deficit in schizophrenia predicts a progressive deterioration of sexual function [2,3,20].

For the relationship found between sexual disorders and antipsychotic daily intake, Devraux reported no difference between first and second generation antipsychotics [21]. Many studies have found a relationship between blocking D2 receptor, desire and

orgasm. In the same way, hyperprolactinemia and low plasma testosterone causes lower desire and erectile dysfunction [15,22,23]. Variety of mechanisms are likely to contribute to antipsychotic-related sexual dysfunction, including hyperprolactinemia, sedation, and antagonism of a number of neurotransmitter receptors ( $\alpha$ -adrenergic, dopaminergic, histaminic and muscarinic) [4,5,23]. Hyperprolactinemia is a major cause of sexual dysfunction. Based on the blockade of dopamine D2 receptors, haloperidol, risperidone, and amisulpride are classed as prolactin-elevating antipsychotics, while olanzapine, clozapine, quetiapine, ziprasidone, and aripiprazole are classed as prolactin-sparing drugs [4,5].

## Conclusion

Sexual dysfunction is prevalent among schizophrenia patients especially among women. This problem seems to be affected from both the disease and its treatment. The high prevalence and the interference with quality of life combine to make sexual dysfunction an important area for clinical assessment and appropriate intervention in the community management of schizophrenia.

## No conflict of interest

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