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ScienceDirect

Comprehensive Psychiatry 65 (2016) 116–121

COMPREHENSIVE PSYCHIATRY

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Sexual dysfunction and its impact on quality of life in Chinese patients with schizophrenia treated in primary care

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Abstract

Purpose: Sexual dysfunction in schizophrenia patients is common. In China, maintenance treatment for clinically stable patients with schizophrenia is usually provided by primary care physicians. Illness- or treatment-related sexual dysfunction in this patient population has been never studied. This study describes the prevalence and correlates of sexual dysfunction and its impact on quality of life (QOL) in patients with schizophrenia treated in primary care in China.
Method: A total of 607 patients with schizophrenia treated in 22 randomly selected primary care services in China formed the study sample. Patients' socio-demographic and clinical characteristics including sexual function and QOL were recorded using a standardized protocol and data collection.
Results: Sexual dysfunction was present in 69.9% of all patients; 60.7% in males and 80.6% in females. Multiple logistic regression analysis revealed that female gender, being single, older age and use of first-generation antipsychotics were independently and significantly associated with more sexual dysfunction accounting for 23.5% of its variance ($P < 0.001$). Unexpectedly, sexual dysfunction was not associated with lower QOL.
Conclusions: High rate of sexual dysfunction was reported in the majority of patients with schizophrenia treated in primary care in China. Given its negative impact on social adjustment, QOL and treatment adherence, efforts should be made to address sexual dysfunction in this patient population.

1. Introduction

Sexual dysfunction is common in schizophrenia with negative consequences, such as low quality of life (QOL) and self-esteem, poor interpersonal relationships and treatment adherence [1,2]. The reasons for sexual dysfunction are complex and may arise from the side effects of psychotropic medications (e.g., sedation and hyperprolactinemia) [3,4], poor physical health [5] and the effects of the illness itself [6]. The reported prevalence of sexual dysfunction in schizophrenia ranges from 16% to 96% [7]. The large discrepancy in prevalence across studies could be attributed to the differences in the illness course of schizophrenia, the criteria and assessment tools and sampling methods. The commonly reported demographic and clinical correlates of sexual dysfunction in schizophrenia included gender [8], antipsychotics [9], old age [10], psychopathology [11] and other adverse effects of treatment [4]. Most of these findings

Disclosure/Conflicts of Interest: The authors had no conflicts of interest in conducting this study or preparing the manuscript.

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http://dx.doi.org/10.1016/j.comppsych.2015.11.002
0010-440X/

were obtained in Western settings. Given that sexual dysfunction is closely related to the complex interplay of biopsychosocial factors [12–14], findings in the Western countries may not be generalizable to Asian patients. Compared to their Western counterparts, Asian schizophrenia patients are less inclined to report sexual dysfunction due to the different perceptions about sexuality in the more traditional Asian societies [15]. Thus, it is necessary to examine the patterns and demographic and clinical correlates of sexual dysfunction in Asian patients.

Sexual function is a sensitive topic both for Asian psychiatric patients and their clinicians. Since many patients are reluctant to talk about their sexuality, clinicians do not raise this topic regularly due to fear of embarrassing or alienating their patients [16,17]. Clinicians' awareness of sexual dysfunction in schizophrenia has important implications because failure to recognize and address this issue can have far-reaching impact on the patients' physical and social well-being.

There are only approximately 20,000 psychiatrists in China serving a population of 1.4 billion [18]. Due to the limited availability of psychiatric services, primary care physicians commonly provide maintenance treatment for clinically stable psychiatric patients. The patterns and risk factors of sexual dysfunction in the significantly large population of schizophrenia patients managed in primary care have not been studied.

The aim of this study was to examine the frequency of sexual dysfunction in patients with schizophrenia treated by primary care physicians and to determine its socio-demographic and clinical correlates and impact on QOL.

2. Methods

2.1. Study design and participants

The study was a cross-sectional survey initiated by Guangdong Mental Health Center and was carried out between August 1, 2013 and July 31, 2014. Inclusion criteria included (1) ICD-10 diagnosis of schizophrenia based on a review of medical record supplemented by a clinical interview, (2) age 18 years or above, (3) treatment provided by primary care physicians and (4) ability to understand the content of the interview. The study protocol was approved by the Ethics Committees of Guangdong General Hospital. Written informed consent was provided by each patient.

The recruitment was as follows. Community-dwelling schizophrenia patients who are managed by primary care services are registered. Twenty-two of the total 92 primary care services in Guangzhou were selected using a random numbers table. All patients treated in the selected primary care services were contacted by phone to provide details about the study protocol. If they agreed to participate in the survey, three psychiatrists with more than 5-year clinical experiences conducted an interview at the local primary care center.

2.2. Assessments

Data on basic socio-demographic and clinical characteristics including use of first- and second-generation antipsychotics (FGSs and SGAs, respectively), antidepressants, anticholinergics and benzodiazepines were obtained from the medical records and entered on a form designed for this study. Dosage of antipsychotics was converted into chlorpromazine equivalent milligrams (CPZeq) [19–21].

Sexual function was measured with the Mandarin Chinese version of the Arizona Sexual Experience Scale (ASEX) [10,22,23] with 5 items measuring sexual function including strength of sexual drive, ease of sexual arousal, penile erection or vaginal lubrication, ability to reach orgasm and satisfaction with orgasm in the past week. The ASEX is a self-reported scale with each item rated from 1 (no impairment) to 6 (complete impairment), providing a total score between 5 and 30 with high scores indicating greater sexual dysfunction. Sexual dysfunction is defined as an ASEX total score of $\geq$19 or any item with a score of $\geq$5, or any three items with a score of $\geq$4 [22]. The Mandarin Chinese version of the ASEX has good psychometric properties in Chinese patients with schizophrenia and it has been used in this population [10,24]. In this study, patients without sexual partners only needed to respond to the first two general items on sexual function (strength of sex drive and ease of sexual arousal).

Psychotic symptoms were assessed with the Brief Psychiatric Rating Scale (BPRS) with its three subscales: Positive (conceptual disorganization, suspiciousness, hallucinatory behavior, and unusual thought content); Negative (emotional withdrawal, motor retardation, blunted affect, and disorientation); and Anxiety and tension [25,26]. Side effects were measured with the Simpson and Angus Scale of Extrapyramidal Symptoms (SAS) which assesses symptoms of rigidity, akinesia, tremor, and salivation [27]. Depressive symptoms in the past week were evaluated with the 10-item Montgomery–Asberg Scale (MADRS)—Chinese version [28,29]. QOL was evaluated with the validated Chinese version of the Medical Outcomes Study Short Form 12 (SF-12) [30]. A higher score on SF-12 indicates better QOL.

The three interviewers underwent an inter-rater reliability exercise with the above-mentioned assessment tools in 10 patients with schizophrenia prior to the study. The inter-rater reliability of the rating instruments and the judgment of sexual dysfunction yielded satisfactory agreement (>0.90).

2.3. Statistical analysis

Data were analyzed using SPSS 20.0 for Windows. The difference between two genders in each domain of sexual dysfunction was compared by chi-square tests. Comparisons in terms of in demographic and clinical variables between patients reporting any type of sexual dysfunction and those who did not were performed by chi-square tests, t-tests and Mann–Whitney U test, as appropriate. QOL was compared between the above two groups using analysis of covariance