EPIDEMIOLOGY & RISK FACTORS

A Population-Based Epidemiologic Study of Female Sexual Dysfunction Risk in Mainland China: Prevalence and Predictors

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ABSTRACT

Background: Epidemiologic data on female sexual dysfunction in China are sparse.

Aim: To assess the prevalence of risk of female sexual dysfunction in mainland China and its regional and sociodemographic variations and physiologic, pathologic, and behavioral risk factors.

Methods: A survey of the general female population was conducted in mainland China from February 2014 through January 2016. Women were randomly selected using multistage, stratified, cluster sampling. The prevalence rate of sexual dysfunction, as measured by the Female Sexual Function Index and a score lower than 23.45 as the cutoff threshold, was determined. Multivariate logistical regression models were used to examine the effects of sociodemographic, physiologic, pathologic, and behavioral factors on women's risk of experiencing sexual dysfunction and domain-specific sexual problems.

Outcomes: The questionnaire on sexual dysfunction was completed by 25,446 women 20 to 70 years old.

Results: The prevalence of sexual dysfunction in women 20 to 70 years old in mainland China was estimated at 29.7% (99% CI = 28.9–30.4), with large regional variations. The prevalence rates of potential domain-specific sexual problems were 21.6% (99% CI = 20.9–22.2) for low desire, 21.5 (99% CI = 20.8–22.2) for arousal disorder, 18.9% (99% CI = 18.3–19.6) for lubrication disorder, 27.9% (99% CI = 27.2–28.7) for orgasm disorder, and 14.1% (99% CI = 13.6–14.7) for sexual pain. Higher educational attainment and urban residency were associated with a decreased risk of sexual dysfunction. Women of ethnic minorities (or non-Han ethnicity) had fewer reports of sexual dysfunction than women of Han ethnicity (odds ratio = 0.67, 99% CI = 0.47–0.97). Diabetes, cancers, pelvic inflammatory disease, and pelvic organ prolapse significantly increased the reports of sexual dysfunction.

Clinical Translation: This survey provided the prevalence and risk factors of female sexual dysfunction in China, information that could be useful for potential prevention and clinical treatment.

Strengths and Limitations: This is the first large-scale, nationally based epidemiologic study of female sexual dysfunction in mainland China. The limitations of the study design included an overpowered study caused by the large sample, the under-representation of younger and unmarried women, and no information on the women's partners, their values and knowledge, and detailed medical conditions.

Conclusions: The prevalence rate of female sexual dysfunction in mainland China was modest overall, although variations existed across regions and social groups. **Zhang C, Tong J, Zhu L, et al. A Population-Based Epidemiologic Study of Female Sexual Dysfunction Risk in Mainland China: Prevalence and Predictors. J Sex Med 2017;14:1348–1356.**

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Key Words: China; Female Sexual Dysfunction; Prevalence; Risk Factors

INTRODUCTION

Female sexual dysfunction, defined as distressing sexual conditions and sexual health problems experienced by women,[1] negatively affects quality of life and interpersonal relationships.[2] Although sexual dysfunction is found to be more prevalent in women than in men,[3] sexual dysfunction in women has not been studied as much as that in men,[2] particularly in a non-Western cultural context. Earlier academic discourse long portrayed Chinese women as passive sexual partners,[4] an attitude attributable to a traditional culture emphasizing male-oriented and procreative sex and to insufficient sex education.[5] However, more recent research has documented increasing sexual knowledge and expectations in Chinese women as a result of social changes during the past decades.[4,6]

Although Chinese women are currently more in control of their sex lives than previously, it is unclear whether their sexual expectations lead to a higher or lower level of female sexual dysfunctions. On the one hand, by expressing sexual desires more openly, women can enjoy better sex lives. On the other hand, despite more permissive sexual attitudes and behaviors in China, women still lag behind men in the pursuit of sexual pleasure and report more anxiety concerning their sexual performance.[6] Therefore, Chinese female sexual dysfunction levels remain largely unknown.

Because Chinese women are usually reluctant to discuss sexual matters openly,[7] it is difficult to collect epidemiologic data on female sexual dysfunction.[8] Unstandardized instruments for measuring sexual dysfunction used in early studies[4,8] have the limitation of cross-national incomparability.

This study aims to fill the gap by using a mostly up-to-date population-based sample to assess the prevalence of female sexual dysfunction, as measured by the Female Sexual Function Index (FSFI), across regions and various social groups in mainland China and to examine the physiologic, pathologic, and behavioral factors associated with a high risk of female sexual dysfunction.

METHODS

Sampling and Survey

A large-scale survey on female sexual and pelvic functions was conducted from February 2014 through January 2016. The sample was collected using a multistage, stratified, cluster sampling method. To represent the economic and cultural diversities of China, the sampling frame was constructed from six provinces that were randomly drawn by computer-generated random numbers from the six major geographic regions of mainland China: Gansu in the northwest, Guizhou in the southwest, Shanxi in central China, Liaoning in the northeast, Jiangsu in the east, and Guangdong in the southeast. The counties and cities of the six provinces were the primary sampling units. Stratified by levels of economic development and urbanization, three counties and three cities were randomly drawn from each province using interval sampling. A target sample size of 9,000 women was designed for each of the six provinces. A comparison with census data for distributions of age, education, marital status, and ethnicity showed that the survey sample was almost representative of the female population of China (Appendix A).

The survey was implemented by the health service centers of the sampled areas during the National Mass Screening on Breast and Cervical Cancers, a free nationwide preventive public health service promoted by the government. All eligible women were informed of and encouraged to participate in the screening. They also were invited to participate in the survey. The questionnaires were distributed in the local health service centers by medical staff who had received training in data collection. The respondents filled out the questionnaire anonymously and independently. Written consent was obtained from respondents before data collection. The research methods were approved by the institutional review board at the principal research site (Peking Union Medical College Hospital, Chinese Academy of Medical Science, Beijing, China). A total of 33,805 participants completed the questionnaire on sexual functioning, for a response rate of 63%. The exclusion of women who were sexually inactive or for whom data were missing or invalid yielded an analytical sample of 25,446 (Appendix B presents a comparison of cases included in and those excluded from the analysis).

Measurements

Women's sexual functioning was assessed using the 19-item FSFI.[9] We adopted the Chinese version of the FSFI, which was translated from the original FSFI.[10]

Female sexual dysfunction is identified by an FSFI score below a cutoff threshold. A score of 26.55, based on US data,[11] had been adopted in many other countries as the cutoff threshold of the FSFI for female sexual dysfunction.[7] However, alternative cutoff scores had been developed that took cultural differences in response patterns from non-Western societies into account. Under the influence of Confucian-based collectivism, North Asian respondents tend to give more midpoint and fewer extreme responses than North American respondents.[12] Studies in Japan and Korea proposed 23.8 and 25 points, lower than the US threshold, as cutoff scores for the FSFI.[13,14] A recent study developing the clinical cutoff score of the FSFI for Chinese women proposed 23.45 as an optimal threshold.[7] We adopted 23.45 as the cutoff score of the FSFI to construct the primary outcome variable, a dichotomous variable indicating whether a woman was at risk of sexual dysfunction. The previous study also developed cutoff scores for low desire (≤ 2.7), arousal disorder (≤ 3.15), lubrication disorder (≤ 4.05), orgasm disorder (≤ 3.8), and sexual pain (≤ 3.8).[7] This allowed us to examine domain-specific results separately.

The survey questionnaire collected information on a respondent's sociodemographic characteristics, physiologic and