The Prevalence and Risk Factors of Female Sexual Dysfunction in Young Korean Women: An Internet-Based Survey

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ABSTRACT

Introduction. In Korea, although male sexual problems have been relatively well addressed, few surveys have been conducted on female sexual dysfunction (FSD) in the general population. In the present study, we investigated the prevalence and identified the risk factors of sexual dysfunction in young Korean women.
Aim. To evaluate the prevalence and to identify the risk factors of FSD in young Korean women.
Methods. A total of 47,000 women were initially approached. All received an e-mail requesting that they participate in a Web-based survey. The participants were asked to complete a questionnaire requesting detailed medical and sexual histories, which included the questions contained in the Korean version of the Female Sexual Function Index questionnaire.
Main Outcome Measures. The prevalence of FSD in young Korean women in the different age groups and risk factors for developing FSD.
Results. A total of 504 women of average age 28.5 years (18–52 years) were evaluated during this survey. Setting the cutoff score for FSD using a receiver operating characteristic curve of our data as 25.0 points, 43.1% of women under 40 years old reported FSD. FSD was detected as a desire problem in 44.0% of women, an arousal problem in 49.0%, a lubrication problem in 37.0%, an orgasm problem in 32.0%, a satisfaction problem in 37.0%, and a pain problem in 34.6%. Risk factors for FSD as determined by logistic regression analysis were increasing age, a low frequency of sex, depression, a sexually abused history, and voiding dysfunction.
Conclusions. The prevalence of FSD in Korean young women was common and comparable to those reported worldwide. **Song SH, Jeon H, Kim SW, Paick J-S, and Son H. The prevalence and risk factors of female sexual dysfunction in young Korean women: An internet-based survey. J Sex Med 2008;5:1694–1701.**

Key Words. Female Sexual Function; Prevalence; Internet Survey

Introduction

In the 1960s, Masters and Johnson provided the first description of human sexual response by men and women [1]. Following their pioneering work, many researchers have evaluated the etiology and treatment of female sexual dysfunction (FSD). Population-based surveys have been conducted and have shown that FSD is a highly prevalent disorder worldwide and that it results in significant personal distress and probably impacts quality of life [2,3]. FSD is known to have several risk factors such as smoking, high body mass index, and low level of education [2,4,5].

In Korea, although male sexual problems have been relatively well addressed, there was only one survey on FSD of Korean women that has been published. Recently, Moriera et al. reported the population level data from middle-aged and older men and women in Korea concerning sexual activity, the prevalence of several male and female sexual problems, and associated help-seeking behaviors [6]. They reported that female sexual problems were highly prevalent in Korea and that

the most common female sexual problem was lack of pleasure and inability to reach orgasm; they also pointed out that only 2% of women in Korea had talked to a medical doctor about their sexual problems. They, however, do not have data from the younger female population in Korea, though Laumann et al. showed that younger females have a higher prevalence of FSD than do younger males [2]. Moreover, Asian cultural factors make investigations of female sexual problems difficult. In the case of FSD, Internet surveys may provide a good solution, and Korea has one of the world's most comprehensive Internet networks. In addition, Internet surveys are commonly conducted in the social sciences in Korea. Internet surveys can provide a secure private environment, while allowing easy data collection and processing. In urology, a number of studies have demonstrated that results obtained using Internet surveys on sexual health concur with those obtained using other methods, such as telephone surveys or mailed questionnaires [7–9].

Aims

The main goals of this study were to investigate the prevalence and to identify the risk factors of sexual dysfunction in young Korean women.

Methods

This Web-based study was conducted during a 2-month period between July/August 2004. We contacted an Internet survey company that already had a subject group, which was similar to the general population in age and marital status and that each subject is paid less than $1 for being involved in the survey. E-mails were sent to 47,000 women aged over 18 years, and they were requested to visit the Web portal. On the Web site, they were asked to participate in this survey if they were or had been involved in sexual activity at a frequency of more than once per month during the past 6 months. To exclude non-bona fide answers, we excluded those with a response time of less than a quarter of the average response time. The questionnaire included 51 questions: questions 1–24 assessed demographics and general health, including voiding function (i.e., International Prostate Symptom Score [IPSS] [10]), whereas questions 25–51 assessed sexual health and function using the Korean version of the Female Sexual Function Index (FSFI) [11–13]. The approval for the study was granted by the ethical review board at our institution. It would be better to use validated questionnaires for urinary symptoms in women but those questionnaires were not validated in Korean. So, the IPSS was used in this study, which has obtained the linguistic validation and is very familiar to urologists.

FSFI scores were obtained by adding six domain scores, which were calculated by multiplying the sum of each domain by the domain factors [11–15]. We developed diagnostic cutoff scores for FSFI using standard receiver operating characteristic (ROC) curves. Based on sensitivity and specificity analyses, we found that an FSFI total score of 25.0 was an optimal cutoff for defining women with sexual dysfunction.

The prevalence of sexual dysfunction for each domain was also calculated and compared according to age group (less than 20, 20–29, 30–39, 40–49 years old). A score of less than the median value was considered to reflect sexual dysfunction for that particular domain [4]. Therefore, sexual dysfunctions for the domains were suggested as a desire score of <3.6, an arousal score of <3.9, a lubrication score of <5.4, an orgasm score of <4.0, a satisfaction score of <4.0, and a pain score of 4.8 or less. The total prevalence of FSD was calculated according to the census data of the Korean population [16].

IPSS includes seven questions covering storage symptoms (frequency, nocturia, urgency), voiding symptoms (weak urinary stream, intermittence, straining), postvoiding symptom (incomplete emptying), and a global quality-of-life questionnaire [10,17]. The total symptom score ranges from 0 to 35. The IPSS is a helpful tool in the clinical management of men with lower urinary tract symptoms (LUTS) and in studies regarding the medical and surgical treatment of men with voiding dysfunction. This questionnaire is not validated in women but could represent the subject's bother about voiding dysfunction and is a familiar tool for urologists; so, we used the IPSS to evaluate the voiding dysfunction in women.

All statistical analyses were performed using SPSS, version 13.0 (SPSS, Chicago, IL, USA). One-way analysis of variance (ANOVA) and the independent t-test were used to compare parametric sexual function scores. A general linear multivariate analysis model was used to calculate the independent risk factors of FSD. All hypotheses were two-sided and P values of <0.05 were considered significant. Values are presented as mean ± standard deviations.