# EPIDEMIOLOGY & RISK FACTORS

# Sexual Dysfunction in Primary Care: An Exploratory Descriptive Analysis of Medical Record Diagnoses



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# ABSTRACT

**Background:** The prevalence of sexual dysfunction (SDx) diagnoses in primary care settings is not well known, which is a concern because of the high prevalence of comorbid chronic health conditions in patients diagnosed with SDx.

Aim: To explore the relation of SDx diagnosis, chronic health conditions, and prescription medications commonly associated with SDx for men and women in primary care using medical records diagnoses.

**Methods:** Exploratory descriptive analyses were used to interpret secondary data from a primary care patient database. The database included patient data from 3 family and internal medicine clinics in the St Louis metropolitan area from July 1, 2008 to June 30, 2015. Analysis included key demographic variables, chronic illness, and health conditions of hypertension, pain, prostate disorder, menopause, substance abuse, depression, anxiety, and associated medications. Analysis of the database yielded 30,627 adult patients (men: n = 12,097, mean age = 46.8 years, 65.6% white race; women: n = 18,530, mean age = 46.6 years, 59.2% white race) with significant comorbid associations between SDx and other chronic illness, health conditions, and medication prescription.

**Results:** Depression, anxiety, pain, hypertension, diabetes, and psychotropic medication use were significantly associated with SDx for men and women. Examination of specific SDx diagnoses showed erectile dysfunction to be significantly associated with all tested variables for men. For women, pain-related SDx diagnoses were associated more with chronic illness, health conditions, and medication use than were psychosexual SDx diagnoses (eg, orgasm), except for menopause. Prevalence varied by sex, with a higher prevalence rate of any SDx for men (13.5%) than for women (1.0%), although sex comparisons were not part of the analytics.

**Clinical Translation:** This study suggests the diagnosis of SDx is closely associated with other common chronic illness and health conditions and could go underdiagnosed in women in primary care.

**Strengths and Limitations:** The cross-sectional nature of the study limits the ability to draw causal conclusions related to the nature of the associated conditions with SDx diagnoses. The generalizability of the findings also might be limited given the specific demographic or health makeup of the St Louis area where the study was conducted.

**Conclusion:** The high comorbidity of SDx with mental health, chronic pain and illnesses, and medication use adds to the growing evidence that sexual health and functioning are essential components of overall well-being and holistic care for men and women. Heiden-Rootes KM, Salas J, Gebauer S, et al. Sexual Dysfunction in Primary Care: An Exploratory Descriptive Analysis of Medical Record Diagnoses. J Sex Med 2017;14:1318–1326.

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Key Words: Dysfunction; Chronic Illness; Medication; Gender; Primary Care

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# INTRODUCTION

Sexual dysfunction (SDx) is a common problem in the United States, with 25% to 63% of men and women reporting at least 1 sexual problem.<sup>1,2</sup> The American Psychiatric Association<sup>3</sup> defines SDx as a significant disturbance in one's ability to sexually perform or experience sexual pleasure. Evidence suggests that diagnosis of SDx increases with age<sup>1,4</sup> and is associated with depression,<sup>1,5–8</sup> post-traumatic stress disorder<sup>9</sup> and other anxiety

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disorders,<sup>5,8</sup> neuropathy,<sup>10</sup> chronic pain,<sup>11</sup> diabetes,<sup>12,13</sup> obesity,<sup>14</sup> substance abuse,<sup>15</sup> high blood pressure,<sup>13</sup> and congenital heart disease.<sup>16</sup> The comorbidity of SDx with mental health and cardiac illness also could be a product of side effects from medications (eg, selective serotonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors, total nutrient admixture, monoamine oxidase inhibitors, and antipsychotics) commonly used to treat depression and other mental health issues<sup>17-20</sup> and hypertension<sup>21,22</sup> for men and women. Older men reported difficulty in achieving or maintaining an erection, lack of sexual interest, climaxing too quickly, anxiety about sexual performance, and inability to climax; conversely, older women reported being most bothered by a lack of sexual interest, difficulty with lubrication, inability to climax, finding sex not pleasurable, and pain at vaginal entry.<sup>2</sup> SDx also appears to be reciprocal in couples, with male erectile dysfunction predicting female SDx.<sup>23</sup> Given the association of SDx with other health outcomes, identification of SDx for providing holistic care for patients in primary care is important.

Many SDx studies have used the self-report survey method.<sup>11,12,16</sup> Only a few studies have used medical records for establishing diagnosis prevalence; however, these are often focused on specialized populations (eg, male veterans<sup>9</sup> or older adults<sup>2</sup>) or have small samples.<sup>7</sup> Medical records might provide a more accurate depiction of the degree to which SDx is identified in primary care and professionally treated. This study used medical records from a large primary care sample for capturing SDx prevalence and possible comorbid mental health and chronic illness conditions for men and women. The 2 goals of this study were to (i) use medical record diagnoses to examine the prevalence of SDx diagnosis for patients seen in primary care clinics and (ii) examine SDx diagnosis and comorbid mental and chronic health conditions for men and women seen in primary care clinics.

## METHODS

#### Subjects

Participants were obtained through secondary data analysis of patient data and demographics in the Department of Family and Community Medicine's Primary Care Patient Data Registry (PCPD) at Saint Louis University (St Louis, MO, USA). Description of how the PCPD was created can be found in previous publications.<sup>24-27</sup> The Saint Louis University institutional review board approved the creation and use of the PCPD for primary care research. The PCPD contains International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes, prescription orders and self-reported medication use, Current Procedural Terminology codes, social history, family history, demographics, laboratory orders, referrals, and vital signs. To be eligible for this study, patients had to be adults  $(\geq 18 \text{ years of age; } n = 31,569)$  and have complete sociodemographic information (n = 30,627). The overall cohort was divided into male (n = 12,097; 39.5%) and female (n = 18,530;60.5%) samples for analyses.

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### Demographics

Demographics included age, marital status, race, and neighborhood socioeconomic status (nSES). nSES was adapted from a validated measure using 7 zip-code-level census estimates from the American Community Survey such as percentage of households below the poverty line, receiving public assistance, or with an annual income below \$35,000; percentage of men 20 to 64 years of age not in the labor force; percentage of adults at least 25 years old with less than a high school education; and log median of household income and home value.<sup>28</sup> Standardized index scores were assigned based on a principal components analysis of all US zip codes. Standardized scores in the PCPD were divided into quartiles of low, lower middle, upper middle, and upper nSES. A clinic usage variable was created to describe the volume of health care used and control for detection bias. For each patient, the average number of visits per month was calculated by taking the total number of visits in the period and dividing by the total number of months under observation. Average visits per month per patient were divided by quartiles and the upper quartile defined high usage.

### Outcomes

#### Sexual Dysfunction Diagnosis

SDx was defined using ICD-9-CM codes and organized by biological sex and type of dysfunction. Female SDx included pain disorders and all other dysfunctions; male SDx included erectile dysfunction and all other dysfunctions. This organization was used to protect patient confidentiality owing to some very small cell counts when cross-tabulated with client demographics or comorbid conditions. Also, classification was based on nomenclature and classification in the ICD-9-CM coding scheme that denote psychosexual and physical disorders. In addition, female sexual pain disorders and male erectile dysfunction were the most common SDx in our sample. Table 1 lists the ICD-9-CM codes and descriptions used for classification.

#### Chronic Illness and Mental Health Diagnosis

Chronic illness and mental health diagnoses were selected based on previous research showing significant co-occurrence with SDx. In addition, we narrowed these diagnoses further by those commonly treated in a primary care setting. ICD-9-CM primary visit codes were used to define the presence of mental health and chronic illness conditions common to primary care. For depression and any anxiety disorder (anxiety disorder unspecified, generalized anxiety disorder, panic disorder, obsessive compulsive disorder, social phobia, or post-traumatic stress disorder), a patient must have had at least 2 diagnoses for the same condition within any 12-month period.<sup>29,30</sup> Smoking status was determined using ICD-9-CM diagnosis and social history data. Substance use disorder was defined by any codes for alcohol or any drug abuse or dependence. Download English Version:

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