Sexual dysfunction among men in secondary care in southern India: Nature, prevalence, clinical features and explanatory models

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ABSTRACT

Background. Sexual dysfunction, common in general medical practice, is under-recognized and inadequately managed resulting in significant morbidity and reduction in quality of life. We examined the nature, prevalence, clinical features and explanatory models of illness among men with sexual dysfunction in a general healthcare setting.

Methods. We recruited 270 consecutive men attending a general health clinic. Participants were evaluated using a structured interview. The International Index of Erectile Function-5, the Chinese Index of Premature Ejaculation-5, Short Explanatory Model Interview and the Revised Clinical Interview Schedule were used to assess sexual dysfunction, explanatory models and psychiatric morbidity.

Results. Premature ejaculation and erectile dysfunction were reported by 43.0% and 47.8% of men, respectively. The most common perceived causes were loss of semen due to masturbation and nocturnal emission. Popular treatments were herbal remedies and resources used were traditional healers. The factors associated with erectile dysfunction were diabetes mellitus, financial stress, past history of psychiatric treatment and common mental disorders such as depression and anxiety; those associated with premature ejaculation were common mental disorders, older age and financial debt. Sexual dysfunctions and concerns were under-diagnosed by physicians when compared to the research interview.

Conclusion. There is a need to recognize sexual problems and effectively manage them in general medical settings. The need for sex education in schools and through the mass media, to remove sexual misconceptions, cannot be under-emphasized.

INTRODUCTION

Sexual dysfunction has been a neglected area of clinical practice in primary and secondary healthcare settings. Sexual dysfunction in men is complex as it interacts with cultural, religious and legal issues and remains a source of embarrassment for many patients. The sensitive nature of complaints and cultural taboos also affects health professionals, who often lack the required competence to manage these conditions in routine clinical practice.

Literature is replete with studies addressing the prevalence of sexual dysfunction. Most of these have been from community-based surveys from high-income countries. Variations in definitions, differences in patient populations, selection and sampling, regional and cultural perceptions and concomitant medical conditions result in wide variations. There is a dearth of systematic surveys about sexuality and sexual dysfunction in India. This study examined the nature, prevalence and risk factors, and attempted to identify common explanatory models of illness among men with sexual dysfunction attending a general healthcare facility.

METHODS

Study design

We used a cross-sectional study to examine the nature and prevalence of sexual dysfunction among men attending a secondary care hospital. We used a case–control design framework to identify factors associated with sexual dysfunction.

Setting

The study was conducted at the general health clinic of the Community Health and Development Hospital (CHAD Hospital), Vellore, a 140-bed secondary care hospital. About 200–250 patients attend the outpatient clinic with a variety of conditions including tuberculosis, leprosy, rheumatic heart disease, HIV/AIDS and common mental disorders.

Participants

Consecutive men above the age of 16 years who attended the outpatient department were considered. Participants were excluded if they had severe language, hearing or cognitive impairment. Written informed consent was obtained from the participants.

ASSESSMENT

Tamil versions of the following instruments were used:
1. 5-item version of the International Index of Erectile Function (IIEF-5): The International Index of Erectile function (IIEF) was developed and validated in 1996–97. It has been regarded as the ‘gold standard’ treatment outcome measure for clinical trials in erectile dysfunction, regardless of the type of treatment, intervention or study population under investigation. It has been linguistically validated and is currently available in 32 languages worldwide. IIEF-5 is an abridged 5-item version of the IIEF, also known as the Sexual Health Inventory for Men (SHIM), was developed and separately validated as a brief,
easily administered diagnostic tool. This simplified version addresses the National Institutes of Health (NIH) definition of erectile dysfunction and has been proven to be a valid specific and sensitive scale for use in clinical settings.13

2. 5-item version of Chinese Index of Sexual Function for Premature Ejaculation (CIPE-5): CIPE-5 is an abridged version of CIPE, which has been found to be as sensitive and specific as the longer version of the CIPE.14 CIPE-5 focuses on ejaculatory latency, difficulty in delaying ejaculation, sexual satisfaction of patient, sexual satisfaction of partner and feelings of anxiety or depression in sexual activity.

3. The Short Explanatory Model Interview (SEMI): The interview, based on Kleinman’s original concepts, explores emic perspectives of illness and employs open-ended semi-structured questions. The subjects are encouraged to talk openly about their attitudes and experiences with the aim of eliciting concepts held, and their relationship to current situations and culture. The interview uses open-ended questions to examine the nature of presenting problems, its causes, impact and severity, help-seeking and the expectations of treatment. It employs probes to explore different issues. It records verbatim responses. Its format also allows for qualitative and quantitative analysis. Major themes are identified and recorded, and are analysed semi-quantitatively and coded dichotomously as present/absent.

The method of analysis has been standardized. The SEMI15,16 takes 20–30 minutes to complete. The non-technical nature of the instrument allows for the translation and adoption into different languages for use in different cultures. The SEMI has been used and translated into many languages including Hindi and Tamil.17–19

4. Revised Clinical Interview Schedule (CIS-R): This is a standard instrument to assess anxiety, depression and common mental disorders.20 It has been translated into many languages and has been used across different cultures and countries. It has been used in India and there are versions in Tamil, Hindi and Konkani.21–23

5. Sexual history interview: We also wanted to collect many other details related to sexual history. These questions, which are part of routine clinical interviews, were put together in a structured format to standardize data collection. Details related to patterns of sexual behaviour, beliefs about sexual activity and opinions on contraception and HIV/AIDS, which were not part of the IIEF-5 and the CIPE-5 but which were relevant to a comprehensive assessment, were included in this section. The structured format provided uniformity in data collection.

6. A special proforma was also used to obtain sociodemographic and clinical details. It included standard questions, which are routinely collected to provide background information about the patient (e.g. age, marital status, education, occupation and income).

These instruments have been used in many other studies done at our centre.17–19,21,24

Data collection

The subjects were interviewed in a consultation room ensuring adequate privacy. The details of the study were explained and written informed consent was obtained. The first author of the study (PT), who is trained in the use of the instruments, interviewed all patients who fulfilled inclusion criteria and gave consent. About 6–8 interviews were conducted per day and each interview lasted for about 45 minutes.

Ethical considerations

The study protocol was approved by the Institutional Review Board of Christian Medical College, Vellore. Written informed consent was obtained, privacy provided, and support and treatment were offered.

Sample size estimation

EpiInfo ver 5.0 was used to calculate the sample size for the prevalence study using the following assumptions: estimated prevalence 30%;2,13,23 estimate of error ±6%. The sample size obtained was 224 for the whole sample.

Data analysis

Mean, standard deviation and range were used to describe continuous variables while frequency distribution was obtained for categorical variables. The chi-square test was used to test the association for categorical variables and Student t-test was used to compare the continuous variables. Multiple logistic regression was done for multivariate analysis to adjust for possible confounders. Odds ratio and confidence intervals were calculated. The statistical software SPSS for Windows Release 16 was used for the analysis of data.

RESULTS

The mean age was 43.4 (range 18–87) years. The majority of patients interviewed were married (n=216; 80.4%), literate (n=230; 85.2%), employed (n=241; 89.3%) and lived in rural areas (n=156; 57.8%). Most had three meals per day (n=192; 71.1%), were able to buy food in the past month (n=218; 80.7%), did not use alcohol (n=204; 75.6%) or tobacco (n=209; 77.4%).

The majority of the sample learnt about sex from friends (n=221; 81.8%) and admitted to masturbation (n=228; 84.4%). A large minority seemed to believe that the physical problems that they had visited the clinic for were due to the loss of semen through masturbation and nocturnal emission (n=74; 27.4%). The majority also reported sexual concerns (n=147; 54.4%), were satisfied with their sex life (n=153; 56.7%), had a single sexual partner (n=154; 57.0%) and did not have any contact with commercial sex workers (n=254; 90.4%).

The men interviewed held diverse beliefs about the causes of their sexual problems: masturbation (n=72; 26.7%), nocturnal emission (n=54; 20.0%), disease (n=61; 22.6%), punishment by God (n=26; 9.6%), karma (n=23; 8.5%), black magic (n=1; 0.4%) and lack of privacy (n=6; 2.2%). They also believed in diverse treatments: herbal remedies (n=187; 69.3%), traditional healers (n=167; 61.9%), special diet (n=142; 52.6%) and medical treatment (n=109; 40.4%).

Of the 270 patients interviewed, 129 (47.8%) men reported erectile dysfunction while 116 (43.0%) reported premature ejaculation. The mean duration of sexual dysfunction was 7.45 years (range 2 months–35 years). There was a statistically significant association between the diagnosis of premature ejaculation and that of erectile dysfunction (χ²=7.29; df=1; p=0.007). Table I documents the factors associated with erectile dysfunction and premature ejaculation on bivariate analysis, while Table II documents the associations on multivariate statistical models. The factors associated with erectile dysfunction included being currently married, financial problems (an inability to buy food in the past month), a history of diabetes mellitus, a past history of psychiatric treatment and a current diagnosis of common mental disorder (anxiety and depression). Older age and current anxiety and depression were risk factors for premature ejaculation.
whereas financial debt just missed statistical significance (Tables I and II).

The diagnosis of sexual dysfunction and the recognition of sexual misconceptions by physicians were compared against the standards of the research instruments. The sensitivity for sexual dysfunction and sexual misconceptions was 2.4% and 1.2%, respectively. However, the specificity for the identification for sexual dysfunction and misconceptions was 100%. All patients who were identified to have dysfunction were referred to a specialist.

**DISCUSSION**

This large study examined issues related to sexual dysfunction among men attending a general healthcare setting. It combines qualitative explanatory models of illness with a diagnosis of sexual dysfunction. However, its cross-sectional nature does not allow for definitive causal inferences.

**TABLE I. Bivariate analyses of factors associated with moderate-to-severe erectile dysfunction (ED)* and with premature ejaculation (PME)† (n=270)**

<table>
<thead>
<tr>
<th>Exposure variable</th>
<th>With ED (n=129)</th>
<th>Without ED (n=141)</th>
<th>Odds ratio† (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &gt;42 years</td>
<td>77 (59.7)</td>
<td>59 (41.8)</td>
<td>2.06 (1.23–3.34)</td>
<td>0.004</td>
</tr>
<tr>
<td>Lack of formal education</td>
<td>25 (19.4)</td>
<td>15 (10.6)</td>
<td>2.02 (1.01–4.03)</td>
<td>0.04</td>
</tr>
<tr>
<td>Currently married</td>
<td>117 (90.7)</td>
<td>93 (66.0)</td>
<td>5.03 (2.53–10.02)</td>
<td>0.001</td>
</tr>
<tr>
<td>Unable to buy food in past month</td>
<td>35 (27.1)</td>
<td>17 (12.1)</td>
<td>2.72 (1.43–5.14)</td>
<td>0.002</td>
</tr>
<tr>
<td>Having financial debts</td>
<td>41 (31.8)</td>
<td>27 (19.1)</td>
<td>1.97 (1.12–3.44)</td>
<td>0.02</td>
</tr>
<tr>
<td>History of diabetes mellitus</td>
<td>25 (19.4)</td>
<td>12 (8.5)</td>
<td>2.58 (1.24–5.39)</td>
<td>0.01</td>
</tr>
<tr>
<td>History of psychiatric illness</td>
<td>9 (7.0)</td>
<td>2 (1.4)</td>
<td>5.21 (1.11–24.60)</td>
<td>0.04</td>
</tr>
<tr>
<td>Common mental disorder§</td>
<td>17 (13.2)</td>
<td>6 (4.3)</td>
<td>3.42 (1.30–8.95)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure variable</th>
<th>With PME (n=116)</th>
<th>Without PME (n=154)</th>
<th>Odds ratio‡ (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &gt;42 years</td>
<td>48 (41.4)</td>
<td>88 (57.1)</td>
<td>0.53 (0.33–0.86)</td>
<td>0.01</td>
</tr>
<tr>
<td>Having financial debts</td>
<td>37 (31.9)</td>
<td>31 (20.1)</td>
<td>1.86 (1.07–3.24)</td>
<td>0.03</td>
</tr>
<tr>
<td>History of hypertension</td>
<td>14 (12.1)</td>
<td>33 (21.4)</td>
<td>0.50 (0.26–0.99)</td>
<td>0.04</td>
</tr>
<tr>
<td>Common mental disorder§</td>
<td>16 (13.8)</td>
<td>7 (4.5)</td>
<td>3.36 (1.33–8.46)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

* International Index of Erectile Function total score ≤16  † Chinese Index for Premature Ejaculation total score ≤14  ‡ Simple logistic regression analysis with ED as the dependent variable  § Revised clinical interview schedule total score >12

Note: 1. The following variables were not significantly associated with ED: living as a joint family, monthly family income ₹1000, alcohol use, nicotine use, hypertension.

2. The following variables were not significantly associated with PME: lack of formal education, currently married, living as a joint family, monthly family income ₹1000, unable to buy food in the past month, alcohol use, nicotine use, hypertension, diabetes mellitus, history of psychiatric illness.

The high prevalence of sexual dysfunction in the sample contrasts sharply with the under-recognition and less than optimal treatment. It documents the association between different risk factors (e.g. older age, poverty, financial difficulties, diabetes, hypertension, psychiatric disorders) and sexual dysfunction.

The study documents a high proportion of sexual misconceptions, which may be associated with seeking help from quacks who often exploit men with such problems. The lack of emphasis and expertise within primary and secondary care means that men with sexual concerns shop for healing and cure making them vulnerable to exploitation. Reinforcing sexual misconceptions related to masturbation and nocturnal emission only increase sexual anxiety and is counterproductive. Similarly, the focus on medication and organic remedies for premature ejaculation, which is easily managed with specific suggestions, actually takes away the confidence required for successful performance.

The association between common mental disorders such as anxiety and depression on the one hand with sexual dysfunction on the other, requires comment. The cross-sectional nature of the study design prevents us from commenting on the direction of causality. Sexual dysfunction can produce symptoms of depression, anxiety and vice versa. However, the fact that antidepressant medication is well known to cause sexual dysfunction means that it should be sparingly used and only in severe varieties of depression.25 Mild and moderate depression should be managed using support therapy and counselling.26 Such an approach would also need to manage the sexual problems.

The results of our study suggest that many people with sexual concerns contact healthcare providers. However, a combination of the patient’s reluctance to reveal sexual concerns spontaneously coupled with the physician’s unease about managing such problems result in a low rate of recognition and management.27,28 Patients rarely report sexual dysfunction as the reason for consultation. The majority of patients with such problems present with physical symptoms such as weakness, fatigue, aches and pains or other medically unexplained somatic symptoms. A small proportion of subjects may present with depression, marital discord or substance abuse. The reluctance by patients and physicians to discuss sexual issues which are considered sensitive or embarrassing, the
perception that sexual problems are not ‘serious’ and inadequate physician skill and confidence in managing these problems contribute to poor clinical practice. The excessive reliance on culturally acceptable, traditional forms of treatments/resources (e.g. traditional healers) and alternative systems of medicine often leads to under-reporting of these symptoms in healthcare settings. However, the most frequently cited reasons among physicians for under-diagnosis are limitations of time and resources, inadequate training of physicians in the recognition and management of these disorders; this in turn results in reduced physician confidence in dealing with such problems and a reticence in discussing these issues during consultation.

The management of sexual dysfunction includes establishing rapport, non-judgemental, respectful communication regarding sexuality, acknowledging distress, eliciting the patient’s perspective, education about nature of illness, identifying and managing misconceptions and anxieties. Avoiding alcohol, nicotine, physical exhaustion before intercourse and ‘spectatoring’ and ‘putting oneself to the test’ during sex are mandatory for success. Simple language, direct questions and the provision of premature ejaculation. 31,32

Conclusion

Sexual dysfunction is a common problem; however, it is rarely discussed, diagnosed or managed in primary and secondary care. It is essential that physicians are empowered and comfortable discussing these issues with patients to allow for appropriate intervention and management.

Contributions. PT was involved in the study design, data collection and analysis; RG was involved in analysis and writing the manuscript; VA and JP facilitated the study and supervised data collection; AK and KSJ planned the study, analyzed the data and were involved in writing the manuscript.

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Conflict of interest. None to declare.

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