

Prevalence of depression and anxiety in Dhat syndrome patients attending a psychosexual clinic in the Psychiatry Department of a tertiary health care centre in Ahmedabad

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Abstract

Introduction: The term *Dhat* comes from the Sanskrit word *Dhatu*. There have been mentions of various syndromes related to semen loss not only in cultures of developing countries but also in the western world. Dhat syndrome is mentioned in the ancient *Susbrut-Sambhita*. As per DSM-V, Dhat syndrome is considered a cultural explanation of distress for patients who refer to diverse symptoms, such as anxiety, fatigue, weakness, weight loss, impotence, other multiple somatic complaints, and depressive mood.

Aim of the study: To determine the prevalence and severity of depression and anxiety in patients with Dhat syndrome.

Material and methods: All consecutive patients (54) presenting with the complaint of Dhat emission were included. Patients who were non-consensual, having depression and anxiety before onset of Dhat syndrome and those having sexually transmitted infections (STIs) or any organic cause for whitish discharge from the penis were excluded. A semi-structured questionnaire of socio-demographic characteristics and variables regarding sexual history related to Dhat was used. Hamilton Depression (HAM-D) Scale and Hamilton Anxiety (HAM-A) Scale were used.

Results: Of the 54 patients about 25.93% had mild symptoms of depression, 14.81% had moderate severity, while 9.26% had severe symptoms of depression, while the remaining 50% of them were normal. While 74% had anxiety of mild severity, 19% had mild to moderate severity and 7% moderate to severe intensity of anxiety. Also 51.85% had comorbid sexual dysfunctions (erectile dysfunction – ED, premature ejaculation – PME).

Conclusions: The primary disease, being depression and anxiety, which are often missed and are resistant to treatment due to their strong basis in cultural misbelief of semen loss, needs to be tackled aggressively.

Key words: Dhat syndrome, depression, anxiety, psycho-sexual disorders.

Introduction

Men's sexual health is least explored and taken into consideration when it comes to problems related to it, thereby leading to various taboos and fears about the sexual health. The term *Dhat* comes from the Sanskrit word *Dhatu* (धातु), which means “metal”, “elixir” or “constituent part of the body”, which is considered to be “the most concentrated, perfect and powerful bodily substance, and its preservation guarantees health and longevity”. The disorder related to this *dhātu*, i.e., semen, is mentioned in the ancient Hindu treatise *Susruta Sambhita* as *shukrameha* (*shukra* = sperm + *meha* = passage in urine).

Since that time there has been a myth prevalent among people of the Indian subcontinent that “it takes 40 days for 40 drops of food to be converted to one drop of blood, 40 drops of blood to make one drop of bone marrow and 40 drops of bone marrow to form one drop of semen” (Akhtar 1988). It is important to note that anxiety associated with semen loss has also been prevalent in western world countries since ages, as Aristotle once said that “Sperms are the excretion of our food; or to put it more clearly, the most perfected component of food” (Aristotle, 384-322 B.C.). An Indian doctor, Narendra Wig, used the term Dhat syndrome first in 1960 (Narendra Wig 1960).

This notion of loss of semen scares the individual into developing a sense of doom if a single drop of semen is lost, thereby producing a series of somatic, anxiety and depressive symptoms which become subsumed due to various cultural beliefs linked to semen loss. The majority of the individuals get the information about Dhat syndrome from friends, colleagues, relatives or online. Fear of semen loss and its cure are propagated by quacks and advertised everywhere on walls, on television, in newspapers and on roadside hoardings in most Indian cities. Most of the patients visit STD clinics, urologists and physicians rather than consulting psychiatrists. Dhat is thought to be a culture-bound syndrome named similarly in South-East Asia as *Jiryen*, in Sri Lanka as *Prameha*, and as *Shen-k'uei* in China.

Currently this syndrome appears within DSM-V, "Glossary of cultural concepts of distress" (APA 2013) and under "other specific neurotic disorders" (F48.8) in ICD-10 (WHO 1992) but has been removed in the ICD-11 beta. According to DSM-V, despite the name, it is not a discrete syndrome but rather a cultural explanation of distress for patients who refer to diverse symptoms, such as anxiety, fatigue, weakness, weight loss, impotence, other multiple somatic complaints, and depressive mood. The cardinal feature is anxiety and distress about the loss of Dhat in the absence of any identifiable physiological dysfunction.

A multi-centric study involved assessment of 780 male patients, aged over 16 years, across 15 study centres. One-fifth (20.5%) of the patients had comorbid depressive disorders and another one-fifth (20.5%) had comorbid neurotic, stress-related and somatoform disorders (Grover *et al.* 2015). Prakash and Sathyanarayana Rao (2010) in their study found that depression was more common in patients with Dhat syndrome (about 40-42%) while the frequency of anxiety was found to be 21-38%. In a study by Vandana Mehta (2009) depression was found to be the most common (39.5%), followed by anxiety neurosis in 20.8%. In a study by Neena Sawant and Anand Nath (2012) among the study population of a case controlled study, all the patients with Dhat syndrome (cases) were diagnosed with depression using Beck's Depression Inventory.

As is evident from history, similar kinds of syndromes were prevalent in Europe, the USA and Australia in the 19th century, and gradually disappeared as a result of changes in social and economic factors, but are still prevalent in developing countries, especially in the Asian subcontinent. Thus to dispel the misbeliefs we

need to spread more awareness regarding the same. Dhat syndrome itself not being the real culprit primarily causing various psychiatric disorders such as anxiety, depression, etc., which are difficult to treat as they are presented as a culture bound belief and are often missed or ignored by doctors, we consider it essential to identify and treat them.

The aim of our study was to determine the prevalence of depression and anxiety, which seem to be associated strongly with Dhat syndrome, and very few studies addressing both depression and anxiety have been conducted so far in our locality.

Material and methods

All consecutive patients presenting with the complaint of Dhat emission to the psychosexual clinic of the Psychiatry Department, who were willing to give informed consent for the study, were included. Patients not willing to give consent, patients having depression and anxiety before onset of Dhat syndrome (as we aimed to find patients who developed depression and anxiety solely due to their misbeliefs regarding semen loss) and patients having sexually transmitted infections (STIs) or any organic cause for whitish discharge from the penis were excluded from the study.

Sampling technique

This cross-sectional study was carried in the Psychiatry Department of a tertiary health care facility, Ahmedabad. Ethical approval was obtained from the institutional ethical committee. The subjects were included after receiving written informed consent. A questionnaire addressing their socio-demographic characteristics was used. A semi-structured questionnaire regarding variables regarding sexual history of patients regarding Dhat was used. The Hamilton Depression (HAM-D) Scale was used for evaluation of severity of depression in participants. HAM-D contains 17 areas to calculate the patient's score. Total scores indicate severity as follows: 0-7 (normal), 8-13 (mild depression), 14-18 (moderate depression), 19-22 (severe depression), > 23 (very severe depression). The Hamilton Anxiety (HAM-A) Scale was used for evaluation of severity of anxiety in participants. Each item is scored on a scale of 0 (not present), 1 (mild), 2 (moderate), 3 (severe), 4 (very severe), with a total score range of 0-56. Total scores indicates severity as follows: < 17 (mild severity), 18-24 (mild to moderate), 25-30 (moderate to severe).

Results

The mean age in our population was 31.7 ±9.2. The syndrome was more prevalent in those with lower education and in the lower socioeconomic classes (Table 1).

Variables related to Dhat syndrome

As seen in Figure 1, duration of Dhat emission was divided into 3 divisions, i.e. 0-6 months – Category A, 6-24 months – Category B, more than 24 months – Category C.

About 26% patients had complaints since less than 6 months, 44% patients had complaints since 6 to 24 months, and 30% patients had been suffering since more than 24 months.

Table 1. Socio-demographic data

No.	Variables	Frequency (n = 54)	Percentage
1	Age		
	< 30 years	28	51.85
	> 30 years	26	48.15
2	Religion		
	Hindu	50	92.59
	Muslim	4	7.41
3	Residence		
	Urban	24	44.44
	Rural	30	55.56
4	Education		
	Graduate	2	3.7
	Higher secondary	8	14.81
	Secondary	21	38.89
	Primary	18	33.33
	Uneducated	5	9.26
5	Socio-economic class		
	Lower	12	22.22
	Lower middle	19	35.19
	Middle	16	29.63
	Upper middle	7	12.96
	Upper	0	0
6	Occupation		
	Consistent earnings	24	44.44
	Inconsistent earnings	30	55.56
7	Type of family		
	Joint	30	55.56
	Nuclear	24	44.44
8	Marital status		
	Married	32	59.26
	Unmarried	22	40.74

As per Figure 2, 55.56% of all patients came to know about Dhat as a problem by themselves, 24.07% came to know about it from friends, 11.11% were informed by their wives, 7.41% learned of it from an online search, while only a few, about 1.85%, came to know about it from their relatives.

As seen in Figure 3, about 41% of the patients did not know the reason for their Dhat loss, about 26% considered it as a result of masturbation, 16% of them considered it as a sexual illness, 13% of patients considered that

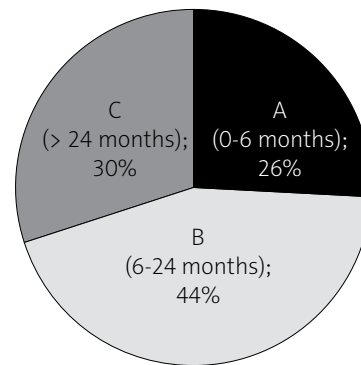


Fig. 1. Duration of Dhat emission

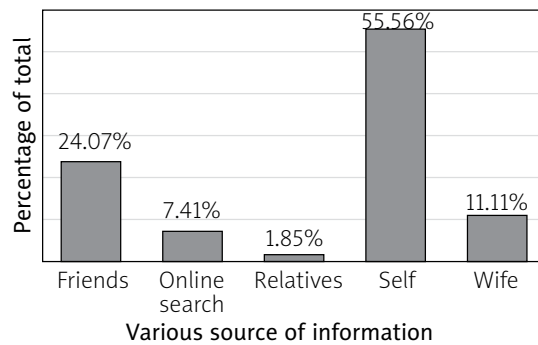


Fig. 2. Source of information of Dhat as a problem

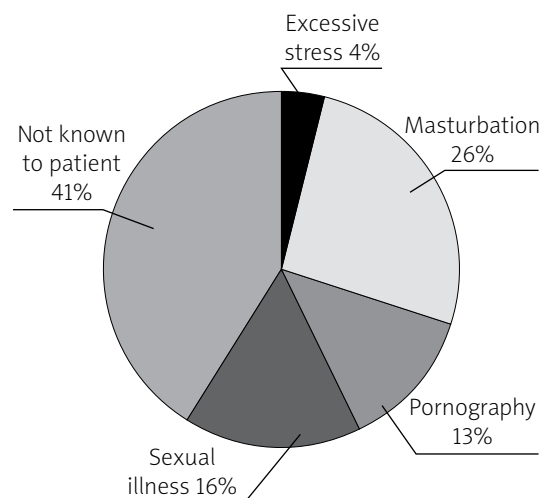


Fig. 3. Patients' reason for Dhat loss

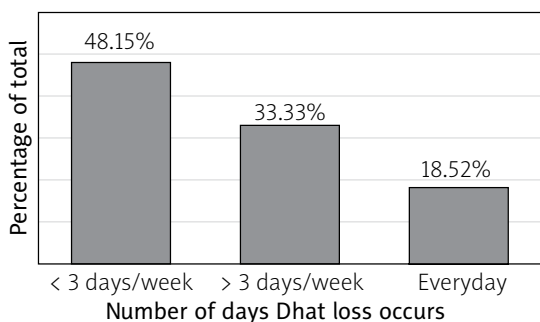


Fig. 4. Frequency of loss of Dhat

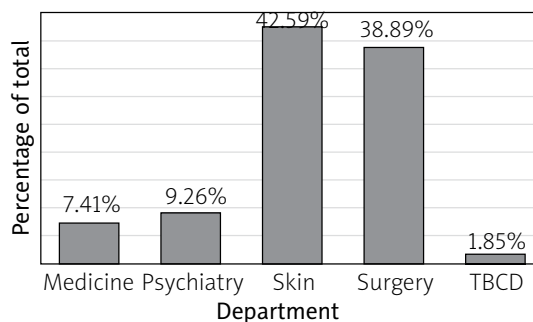


Fig. 5. Source of information for psychiatry consultation

watching pornography led to Dhat emission, and a few of them, 4%, considered it as a result of excessive stress.

As seen in Figure 4, 48.15% of the patients had a frequency of Dhat loss less than 3 days in a week, about 33.33% of them had Dhat loss more than 3 days in a week and 18.52% of them had Dhat loss every day.

As shown in Figure 5, 42.59% of patients were referred from the Dermatology Department for psychiatric consultation, similarly 38.89% from the Surgery Department, 7.41% from the General Medicine Department, 1.85% from the Pulmonary Medicine Department, whereas 9.26% of patients came directly to the Psychiatry Department.

Table 2. Comorbid illness

Comorbid illness	Frequency of comorbid illness
COPD	1.85%
Diabetes	3.70%
ED	9.26%
ED + PME	9.26%
HIV (AIDS)	1.85%
HTN	5.56%
Nil	35.19%
PME	33.33%

COPD – chronic obstructive pulmonary disease, ED – erectile dysfunction, PME – premature ejaculation, HIV – human immunodeficiency virus, AIDS – acquired immunodeficiency syndrome, HTN – hypertension

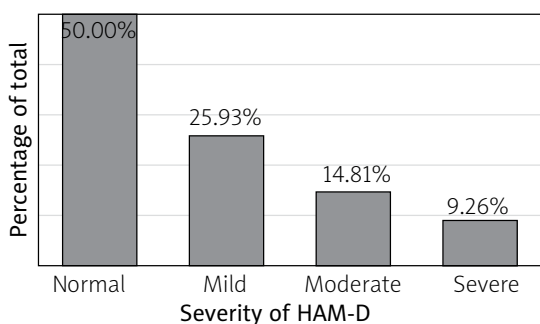


Fig. 6. Hamilton Depression Scale results

Table 2 shows that sexual comorbidities are more commonly seen in patients with Dhat syndrome. About 33.33%, i.e. one third, of the patients suffered from premature ejaculation (PME), 9.26% suffered from erectile dysfunction (ED), and similarly 9.26% of them suffered from both ED and PME. 5.56% suffered from hypertension, 3.70% from diabetes and 1.85% from chronic obstructive pulmonary disease (COPD) and HIV (AIDS). The remaining 35.19% did not have any comorbid illness.

None of the patients had a past history or family history of any kind of psychiatric illnesses.

As is evident from Figure 6, about 25.93% of all patients had mild symptoms of depression, 14.81% had symptoms of moderate severity, and 9.26% of them had severe symptoms of depression, while the remaining 50% were normal. The mean HAM-D score was 9.665 ± 5.8 .

Figure 7 shows that a huge proportion of the total patients, i.e. 74%, had anxiety of mild severity, 19% showed mild to moderate severity and 7% of the total showed moderate to severe intensity of anxiety. The mean HAM-A score was 13.5 ± 6.9 .

Discussion

Our aim of this study was to determine the prevalence and severity of depression and anxiety

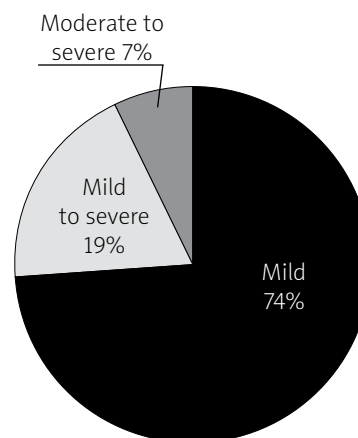


Fig. 7. Hamilton Anxiety Scale results

in patients with Dhat syndrome. The majority of patients included in this study were below the age of 30 years but it was almost equally found in ages above 30 years also. The mean age was 31.7 ± 9.2 . It was found more often in the rural than the urban population and it was more prevalent in lower and middle socioeconomic classes. We also found that it was more prevalent in patients who were educated to less than secondary level. These findings were in concurrence with the findings of various studies by Behere and Natraj (1984), Chadda and Ahuja (1990), and Khan (2005). It was equally seen in patients irrespective of their type of family, i.e. joint or nuclear, or their occupation. It was seen more often in married men, the probable reason being that most of the patients were of a migrant population who stayed away from their families and their wives.

An earlier review of studies on Dhat syndrome reported prevalence of comorbid depression to be 40-66% and that of anxiety disorders to be 21-38% (Grover *et al.* 2015; Bhatia and Malik 1991; Chadda and Ahuja 1990; Dhikav *et al.* 2008). The prevalence of depression and anxiety disorders in the present study was 50% for depression, while anxiety with severity ranging from mild to severe was seen in almost every patient; a majority (74%) had mild severity, while 19% had mild to moderate and 7% had moderate to severe anxiety, which was quite a lot higher than the values reported in a study by Sathya Prakash *et al.* (2016) but the findings were similar to a study by Ashwini *et al.* (2019), in which almost all the participants had moderate to severe level of anxiety and depression.

Unlike other studies in this study we found that anxiety was seen in almost every patient whether of mild or severe type. Prevalence of depression was found to support the previous reviewed studies (Grover *et al.* 2015; Bhatia and Malik 1991; Chadda and Ahuja 1990; Dhikav *et al.* 2008).

The rate of sexual dysfunction in the form of PME alone was about one third (33.33%), ED (9.26%) and those having both ED + PME was 9.26%, values which were very similar to those reported earlier in the literature (Deb and Balhara 2013). Incidence of psychosexual dysfunctions along with Dhat syndrome was found to be higher in our study. Premature ejaculation and erectile impotence were reported most by the patients. Similar findings were reported by Behere and Natraj (1984), Chadda and Ahuja (1990), and Khan (2005).

The study limitations were:

- small sample size,
- as the study sample is hospital based it cannot be applied to the general population.

Conclusions

This study concludes that the lack of detailed exploration in patients with Dhat syndrome often might lead to missing psychiatric comorbidities such as depression and anxiety which are of high importance to be recognized and treated. Also comorbid sexual dysfunctions along with Dhat syndrome need to be addressed. Basic sex education needs to be given to the patients, which might further help them reduce their anxiety regarding the loss of Dhat.

Disclosure

The authors declare no conflict of interest.

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