

## Current Nosology of Dhat Syndrome and State of Evidence

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### Abstract

*The nosological status of 'Dhat syndrome' is unclear. The Diagnostic and Statistical Manual of Mental Disorders -5th edition (DSM-5) has withdrawn the separate diagnostic status given to 'Dhat syndrome' in the earlier versions and looks at Dhat syndrome as a culturally influenced method of expressing distress. Small variations in presentations noticed across cultures may thus be explained as a function of cultural influences. This is perhaps, contrary to the traditional reliance on descriptive psychopathology and clinical phenomenology as the fulcrum of nosology and diagnosis in psychiatry. The present article does not aim to provide an exhaustive review of 'Dhat syndrome'. Instead, it looks at the current nosological status of 'Dhat syndrome' from a clinical, phenomenological, psychopathological and diagnostic stability standpoint. It is hoped that these insights will contribute to a more informed nosological framework for culture bound syndromes in general and 'Dhat syndrome' in particular.*

### Introduction

Culture has a major impact on human mind and behavior. Dhat syndrome has been included under Culture Bound Syndromes (CBS) in Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV. CBS refer to "recurrent locality specific patterns of aberrant behavior and troubling experience that may or may not be linked to a particular DSM-IV category" [1]. DSM-5, however, prefers the term Cultural Concepts of Distress (CCD) which encompasses three related constructs: cultural syndromes, cultural idioms of distress and cultural explanations of distress or perceived causes [2]. Many researchers have suggested that the term CBS may be a harmless misnomer at best (as many of them have cross-cultural applicability) or a misleading moniker at worst (as the term suggests that it may be relevant only in some cultures reducing the global interest to include it meaningfully in the classificatory systems) [3].

The nosological status of 'Dhat syndrome' remains unclear. Several arguments have been raised; that it may be subsumed under depression, or that it may be a culturally appropriate way to express distress

and that it may not merit a separate diagnostic category. Classification of a condition helps in understanding it better and also spurs research into its biological correlates which has the potential to further validate its diagnostic status. Both DSM-IV [1] and DSM-5 [2] have included Dhat syndrome under appendix while the International Classification of Diseases (ICD)-10 [4] includes the disorder under somatoform spectrum disorder. The ICD-11 is expected to be tabled in 2019 and would carry significant implications whenever it is released. The time is ripe therefore, to relook at the evidence for nosological status of Dhat syndrome.

### Historical overview

The word Dhat is derived from the Sanskrit language 'Dhatu' which means constituent of the body [5]. History of Dhat syndrome dates to Sushruta Samhita(1500BC). Concept of Dhat syndrome has been mentioned as 'Shukrameha', which means passage of sperm in urine [6]. Hippocrates (460-377BC) mentions the importance of semen as a component to give form to the human body [7]. Aristotle (384-322 BC) mentions the importance of semen as the 'most perfect' component of our food [8].

In the Indian subcontinent, semen is meant as a conservative fluid. The ayurvedic school of teaching propagates that 40 drops of food is converted to one drop of blood [9], 40 drops of blood to make one drop of bone marrow, 40 drops of bone marrow to make one drop of semen [10]. Thus, it takes a lot of time for the production of semen and hence it needs to be conserved. The concept of Dhat as a 'culture bound syndrome' was formally introduced by Wig in 1975, who conceptualized it as a cluster of psychosomatic and sexual symptoms [11]. In more recent times, Dhat syndrome features have been reported in females also [12]. Dhat syndrome is present in other Asian countries as well. In China, it is called shen-k'uei, a condition characterized by distressing passage of semen as vital deficiency [13]. Dhat syndrome have also been discussed in Sri Lanka [14] Thailand [15] and Arabian [16] literature as excessive semen loss presenting as physical symptoms.

### Classification of Dhat syndrome in major diagnostic systems

In the ICD-10, Dhat syndrome finds a mention under other specified neurotic disorders [4]. It lacks any diagnostic and cultural explanatory guidelines except for a purported association with locally accepted cultural beliefs and practices.

In ICD-11, previously classified neurotic and stress related disorders are classified under 6B1 Anxiety and fear related disorders [17,18]. Further explanations and importance of Dhat syndrome among other Culture bound syndromes has not been discussed.

In DSM-IV-TR, Dhat syndrome is classified in Appendix -I as a culture bound syndrome, which is defined as "locality-specific patterns of aberrant behavior, recurrent, and troubling experience, that may or may not be linked to a particular DSM-IV diagnostic category indigenously considered to be illnesses, or at least afflictions". It is generally understood as limited to specific societies or culture areas [1].

In DSM-5, released in 2013, there are some significant changes [2]. The term 'culture bound syndrome' has been replaced with a broader term called 'cultural concepts of distress'. The latter refers to ways that cultural groups experience, understand, and communicate suffering, behavioral problems, or troubling thoughts and emotions. This includes three sub-concepts—syndromes, idioms, and explanations

- Syndromes refer to clusters of symptoms and attributions that tend to co-occur among people in specific cultural groups contexts and recognized locally as coherent patterns of experience.
- Idioms are mentioned as ways of expressing distress that may not involve specific syndromes or symptoms, but with collective, shared ways of experiencing and talking about social and personal concerns.
- Explanations are the labels, features or attributions of an explanatory model that explains culturally recognized meaning of symptoms, illness, or distress.

In addition, DSM-5 has also proposed specific interview guidelines called Cultural Formulation Interview (CFI) which can be used for in depth assessment and understanding the cultural concepts of distress [2].

There are several critiques about changes in DSM-5 classification of 'Dhat syndrome'. Firstly, it appears that the concept of idioms, upon deeper analysis, actually resembles old wine in a new bottle. The very fact that cultural influences on these idioms of distress are marked enough to alter the presentation of the disorder seems to be sufficient to justify the status of a separate diagnostic status for Dhat syndrome [19,20]. Secondly, one of the common arguments given against the validity of 'Dhat syndrome' construct is the high burden of comorbid depressive symptoms. As the same authors state, this finding does not necessarily invalidate a diagnosis of 'Dhat syndrome', as depressive symptom burden is similarly high in a variety of other conditions such as anxiety disorders too [20].

## **Current understanding and evidence for Dhat syndrome**

### **Phenomenological aspects**

#### **Causative attributions**

Propagated by Vedic literature, the cultural ideology boosts the belief that the vitality of a male resides in his semen [21-23]. Patients with Dhat syndrome exhibit undue concern for the loss of semen because they feel that their vitality is drained out from the body. Most common cause attributed to initiate loss of semen is masturbation [23-26], followed by night falls [23,25], having sexual relations prior to marriage [25,26], excessive sexual desire or intercourse, poor food hygiene [25], less water intake and less physical exercise [23]. The assertion that many such factors initiate and maintain the semen loss remains unexplored.

#### **Semen loss characteristics**

Patients with 'Dhat syndrome' were able to appreciate the loss of semen while it was occurring. The semen, while being lost, may appear as a less viscous and thin liquid [27], sometimes with a creamy or slimy [28], milk-like or

watery consistency [25]. A lesser proportion of subjects report that Dhat may be thick and oily in its consistency and may be meagre in subjective measure of quantity [27]. Almost all the studies report that the patient recognizes loss of semen per urethra.

#### **Alternate routes of loss**

Patients report of loss of semen in urine [25,29,30]. Some reports do exist which reveal that patients do complain of loss of semen through the anus while during straining in defecation [22,28]. A recent study found that in a general medical setting, one in two patients of Dhat syndrome reported passage of semen through anus [31]. Rarely, highly suggestible patients have reported the passage of semen through saliva [32].

#### **Consequences**

Passage of Dhat leads to burning sensation while passing urine, fatigue, lack of energy [21,25], inducing amotivation and anhedonia [33], diminishing penile size, mental illness or potential death [25,34]. The additional consequences reported are losing minerals from bones, begetting deformed offspring or only female children [34].

### **Psychopathology**

Patients with Dhat concerns are found to report more of depressive symptoms followed by anxiety features [26,35]. A landmark study by Dhikav and colleagues showed that two-thirds of patients with 'Dhat syndrome' actually met the criteria of depression and they responded to anti-depressant [36]. Studies have found that patients with 'Dhat syndrome' and family history of depressive disorders are more likely to report of depressive symptoms [37]. The expression of depressive symptoms are manifold: such as excessive guilt, low mood, ideas of worthlessness, and decreased self-esteem [23,27]. The concerns on the penile size and sexual functioning could be viewed as a manifestation of decreased self-esteem as seen in depression [37]. This implies that Dhat can be a form of expression of depressive cognitions [22].

As the patients with 'Dhat syndrome' often somatise their

complaints, the psychosomatic aspects of the disorder has also received significant attention. Studies point out that patients harbor hypochondriacal concerns, abnormal illness behavior, and somatic symptoms characteristic of functional somatic syndrome [25,28,38]. The somatic concern is coupled with increased scanning behavior reinforced by cultural beliefs [26].

Contrasting reports reveal that the Dhat syndrome construct shows weakly significant correlations with depressive and anxiety symptoms. Hence, the core or central belief system, which is more focused on somatic and sexual health, could be a manifestation of an internalizing psychopathology warranting further exploration [31].

### Comorbidity patterns

Most studies reveal that the presence of solitary Dhat syndrome is rare in the population. The systematic approach and exploration for comorbid psychiatric illnesses is the rule in most cases. The syndrome more often presents with psychiatric comorbidities and comorbid sexual dysfunction. Studies posit that the genesis of comorbidities can be attributed to the psychological distress associated with loss of semen [39]. Depressive disorders are the more frequently observed psychiatric comorbidities followed by anxiety neurosis, stress-related, and somatoform disorders [25,31,33,39].

Figure A depicts the shared symptoms between Dhat syndrome and depressive, anxiety and somatoform

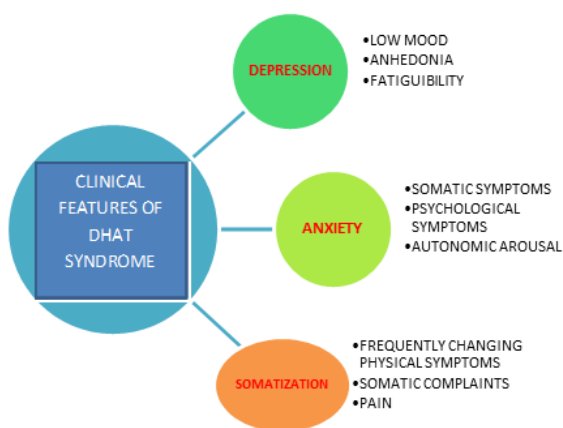


Figure A: Symptoms of Dhat syndrome shared with other psychiatric disorders

disorders. Some studies have found the presence of obsessional neurosis [12, 29]. There are case reports which studies the association between Dhat syndrome and closely-related behavioral syndromes such as pornographic addiction [27]. Substance use disorders is a frequent comorbidity in patients with Dhat syndrome possibly due to the perception of self-medication of Dhat symptoms with alcohol [37]. Reports do exist which reveal that borderline personality can be associated with Dhat syndrome [40]. A single case report has identified the presence of Dhat syndrome as a prodrome of schizophrenia, which was diagnosed later when the patient developed psychotic symptoms [41].

Various sexual dysfunction syndromes co-exist with the concern of semen loss [24]. Among the sexual dysfunction syndromes, psychogenic premature ejaculation is the commonest followed by psychogenic erectile dysfunction [23,35]. Patients also report the feeling of “loss of masculinity” implying a wide range of sexual dysfunction [31]. In addition, studies argue that sexual dysfunction in Dhat syndrome get compounded by the presence of substance use disorder especially nicotine use. Factors such as childhood adversities also seem to be associated with adult-onset sexual dysfunction in patients with Dhat syndrome [42].

The effects of psychiatric comorbidities on Dhat syndrome can be manifold. The presence of comorbidities tend to influence the illness perception of the patient by inducing alexithymia and hypochondriacal ideas [39]. The presence of comorbidities influence the treatment decisions such as prescription of more number of psychotropics and concurrent psychotherapy [23,29,33,40].

### Course and outcome

The onset of Dhat syndrome seems to be acute [26]. Complete recovery can be observed in a subset of patients ranging from 22% to 64% [26,43,44]. One study has analyzed the outcome of patients with ‘pure’ Dhat syndromes and the diagnostic conversion rates over the course of the illness. Over a period of six years, around 64% patients no longer fulfilled the criteria for



Dhat syndrome. Over a period of time, most patients were diagnosed as having somatoform disorders. The researchers postulated that the patients with culture-bound syndromes tend to realize the cultural explanations and comprehend acceptable illness models [44]. The findings need to be considered with caution as there were significant drop-out rates noted in patients with Dhat syndrome. The common causes for drop-outs being lack of adequate knowledge of symptoms, stigma, not able to allocate time for consultation, and prescription of psychotherapy rather than medications [43]. The description of the disorder is mainly restricted to Asian and associated regions. However, recent studies across the globe indicate the problem of semen loss concern can be widespread due to the effects of acculturation and migration [30].

### Concept of female Dhat syndrome

Akin to the clinical picture seen in males with Dhat concerns, females also have reported loss of virility and vitality through vaginal discharge [12]. The women tend to report that the fluid was thick yet transparent, non-foul smelling and intermittent, leading to deleterious effects on body energy levels and cosmetic side-effects [12]. Nevertheless, the patients report significant anxiety, obsessions, and depressive symptoms secondary to vaginal discharge [12,45,46]. Additionally, the affected women may attribute the psychosomatic fatigue and pain symptoms to the loss of vitality through vaginal discharge [45]. The management protocol falls in line with that executed with male Dhat patients: pharmacotherapy with preferably anti-anxiety agents such as Selective Serotonin Reuptake Inhibitors (SSRIs) combined with psychotherapy [12,41].

### Interventions

The comprehensive treatment plan of 'Dhat syndrome' includes pharmacotherapy and psychotherapy. Verbal reassurance [24] and systematic sex education [21,24] can be used as simple yet effective counselling strategies. Structured CBT, insight-oriented psychotherapy, and occasionally, acceptance and commitment therapy have shown promising results in Dhat syndrome

[33,40]. Pharmacotherapy includes administration of anti-anxiety agents with Selective Serotonin Reuptake Inhibitors (SSRIs) being chosen in most of the studies [12,34] followed by Selective Norepinephrine Reuptake Inhibitors (SNRIs)[27]. The knowledge on the efficacy of the comprehensive model may be limited because of the high drop-out rates noted with Dhat syndrome patients [26].

A multi-disciplinary model to treat Dhat syndrome has been proposed, which incorporates the following steps:

1. Intake and assessment
2. Socializing the patient to Cognitive Behavioural Therapy (CBT)
3. Basic sex education
4. Cognitive restructuring
5. Relaxation exercises
6. Imaginal desensitization
7. Masturbation as homework
8. Kegel's exercises and other specific techniques like 'stop-start' technique

The above model was feasible, effective and well received by patients.

Traditional medicine practitioners (ayurveda, homeopathy, etc.) can often reinforce the patient's beliefs about the debilitating effects of passage of semen. Here, an integrated approach in liaison with traditional healers can be used to dispel myths about semen loss and encourage scientifically valid explanations. Incorporation of sex education and health programs in educational

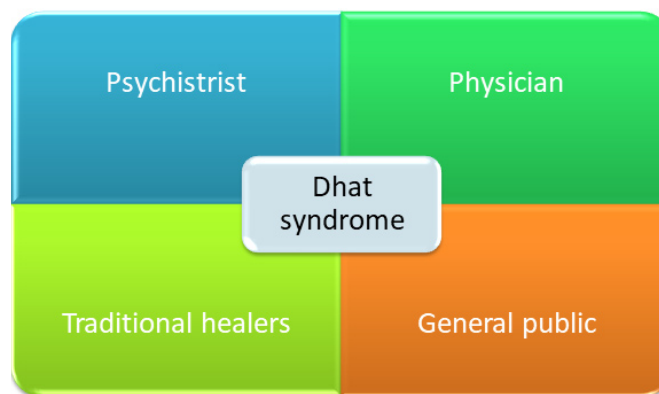


Figure B Multi-Disciplinary model for approach of Dhat syndrome

curriculum in high schools and colleges may help to tackle maladaptive thoughts and encourage alternate explanations for bodily symptoms.

Figure B depicts all the stakeholders who would need to participate for effective management of people suffering from 'Dhat syndrome'. The felt need is to provide integrated explanations that are scientifically sound, while at the same time, factoring in the explanations given by the traditional practitioners can go a long way in enhancing patient satisfaction and outcomes.

One of the limitations of the Dhat syndrome literature landscape is that majority of the published evidence on 'Dhat syndrome' come from case reports and there is a lack of systematic research into this area. This renders the process of drawing firm conclusions a rather arduous task.

## Conclusion

The nosological status of 'Dhat syndrome' continues to

be unclear. While phenomenological studies, based on the concept of illness behaviour or belief systems, argue for a separate diagnostic status for 'Dhat syndrome', studies assessing co-morbidity patterns suggest a close relationship with depression, but not anxiety. Certainly, the DSM-5 stand of bringing 'Dhat syndrome' under the rubric of 'cultural concepts of distress' seems to suggest that evidence for a separate diagnostic status for 'Dhat syndrome' is lacking. This position is also supported by the few follow-up studies available which points to the longitudinal instability of a diagnosis of 'Dhat syndrome'. Perhaps, owing to the increasing social, economic and cultural transitions, both in India and elsewhere globally, the presentation and help-seeking behaviors in culture bound syndromes like 'Dhat syndrome' have also undergone parallel changes. Nosologic researchers need to factor in these considerations and undertake a periodic revaluation of the beliefs and behaviours underlying culture bound syndromes as they are likely to be dynamic.

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