A follow-up study of patients with Dhat syndrome: Treatment pattern, outcome, and reasons for dropout from treatment

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ABSTRACT

Aim: The aim of this study was to evaluate the treatment pattern and satisfaction with treatment provided to patients with Dhat syndrome. It was also aimed to study the follow-up rates and reasons for dropping out of treatment in patients with Dhat syndrome.

Materials and Methods: Sixty-four subjects diagnosed with Dhat syndrome were prospectively contacted to evaluate treatment satisfaction and reason for dropout after 6 months of baseline evaluation. Sociodemographic, clinical details were recorded at initial intake and Sex Knowledge and Attitude Questionnaire was applied. After 6 months, information on treatment received, number of follow-up visits to the clinic and the outcome were extracted from the treatment records. Treatment satisfaction using Patient Satisfaction Questionnaire and reasons for dropping out from treatment were assessed by a telephonic interview.

Results: Twenty-three patients were categorized as treatment completers, 14 as early drop-outs and 27 as late drop-out. The mean (standard deviation) number of visits over the period of 6 months was 3.81 (3.06). The outcome at 6 months was no change in 45.3%, improved in 32.8% and recovered in 21.9%. Higher proportion of treatment completers (52.2%) sought psychiatric help on their own compared to those who dropped out early from the treatment (7.1%). Treatment completers had better knowledge, and more positive attitude toward sex compared to late drop-out group. 34.4% of the subjects were fully satisfied with the various components of treatment. Level of satisfaction was highest for treatment completers. The most common reasons given by those who dropped out early were “not able to spare time for consultation” (21.4%) and “not prescribed medications” (21.4%). The most common reason given by those belonging to “late drop-out” group was ‘no improvement with treatment in symptoms of Dhat syndrome’ (40.7%).

Conclusions: Patients with Dhat syndrome frequently drop-out of the treatment network. There is a need to reorganize the services for these patients and understand their expectations from the treatment so as to provide better care.

Key words: Dhat syndrome, treatment satisfaction, outcome, follow-up

INTRODUCTION

“Dhat syndrome” is a culture-bound syndrome, characterized by the presence of anxiety, vague and sexual symptoms, all of which are attributed to loss of semen. Although a number of studies from India and other countries have described the clinical features of Dhat syndrome, little information is available about their treatment outcome. Available data suggests high drop-out rates. Singh (1985) studied 50 patients presenting with male potency disorders of whom 40% patients fulfilled diagnosis of Dhat syndrome, and another 22% had Dhat syndrome with impotence. They reported that about two-third of the patients did not attend the clinic after the initial visit. Authors hypothesized that dissatisfaction...
with the explanation of disease provided to them could account for such early drop-out from the clinic. Bhatia and Malik[7] examined 48 consecutive male patients of potency disorders, of whom two-third also had Dhat syndrome with or without impotency and/or premature ejaculation. In terms of treatment given the authors divided the study group into four sub-groups (anti-anxiety drug, anti-depressant, placebo, and psychotherapy) and reported best response in those receiving anti-anxiety or anti-depressant drugs while those receiving psychotherapy showed minimal response. In another study involving 50 patients, Behere and Natraj[9] treated patients with Dhat syndrome with psychoeducation and minor tranquillizers and by the end of 1-year reported about two-third of them to have recovered from their symptoms. In another small sample of subjects (n = 30), Dhikav et al.[14] reported usefulness of selective serotonin reuptake inhibitors and regular counseling in patients of Dhat syndrome with comorbid depression. In addition, there are some case reports and case series which have reported use of cognitive behavior therapy in patients with Dhat syndrome.[15,16]

From the brief review of the literature, it is clear that there is a lack of data on the treatment outcome of patients with Dhat syndrome. Singh[13] has hypothesized that many patients may be dissatisfied with the explanation given to them and resuitantly drop-out. However, this has never been empirically evaluated. Accordingly, there is a need to study the treatment outcome of patients with Dhat syndrome. In this background, present study aimed to evaluate: (1) Treatment offered to the patients with Dhat syndrome; (2) follow-up rates and outcome of illness/treatment; (3) satisfaction with the treatment received and (4) reasons for “dropping out” of treatment.

MATERIALS AND METHODS

Study design
This study followed a prospective design in which sociodemographic and clinical data were obtained from the patients prior to starting of treatment and patients were prospectively contacted to evaluate treatment satisfaction and reason for drop-out after 6 months of baseline evaluation.

Ethical approval
The study was approved by the Ethics Committee of the Institute, and written consent was obtained from the patients at the baseline evaluation and written/verbal consent was obtained at the time of follow-up evaluation.

Setting
This study was carried out in the psychosexual clinic of a multi-speciality teaching tertiary care hospital in North India. The clinic runs 6 days a week, with a detailed evaluation of patients done on every Wednesday. All the patients registered with the psychosexual clinic are initially screened by a senior resident or a consultant, and diagnosis of sexual disorder is made as per the International Classification of Diseases-10 criteria.[17] Depending on the evaluation, a patient is advised investigation, medications, consultation with other specialists (urologist, endocrinologist, etc.) and is provided information about their diagnosis and plan of management. On every Wednesday, every patient is assessed in detail by a team of the junior resident, senior resident and the consultant. A final diagnosis is made, and the treatment plan is formulated to be carried out. The detailed evaluation involves taking a complete history, in terms of symptoms, factors associated with the development of symptoms, childhood and adolescent sexual behavior, sexual practices and preferences, sexual relationships, etc., In addition, patient’s sexual knowledge and attitude is assessed using Sex Knowledge and Attitude Questionnaire (SKAQ-II).[18]

For this study, all the patients registered with the psychosexual clinic from January 2013 to October 2013 and diagnosed to have Dhat syndrome were eligible for the study.

At the baseline, after obtaining written informed consent, sociodemographic and clinical details were recorded. At this time, neither the treating clinicians nor the patients were informed that the patients would evaluated on a later date for follow-up assessment in order to remove any bias. The treating clinicians were free to choose the treatment strategies (pharmacological and nonpharmacological) which they thought were best-suited for their patient based on the clinical profile including psychiatric morbidity. The nonpharmacological treatment of patients with Dhat syndrome is done as per the standardized treatment package developed by Avasthi and Gupta[19] which stresses on sex education and relaxation exercises. Sex education mainly focuses on anatomy and physiology of sexual organs and their functioning with reference to masturbation, semen formation, nocturnal emissions and the functioning of the genitourinary system independent of the gastrointestinal tract. Relaxation therapy includes Jacobson’s progressive muscular relaxation technique which should be practiced 2–3 times/day regularly. If there is the presence of associated anxiety or depressive symptoms use of anxiolytics and or anti-depressants is allowed. The therapy is provided usually over 4–6 sessions held at weekly to fortnightly intervals.

After 6 months of the initial evaluation, treatment records of all the patients were reviewed, and information about the treatment received, number of follow-up visits and the outcome was extracted. In addition, effort was made to contact all the patients (telephonically) and those who provided verbal informed consent were evaluated for their treatment satisfaction as per the Patient Satisfaction Questionnaire (PSQ).[20] improvement in symptoms of Dhat syndrome with the treatment received from the clinic
and information was also obtained about the reasons for drop-out from the treatment, wherever applicable. During the telephonic contact, follow-up data of treatment records were corroborated from the patient and any information not recorded in the treatment records was completed. If a patient could not be contacted on telephone at the first instant, two more attempts 1-week apart, were made to contact the patient. If a patient could not be contacted after three efforts, then that patient was excluded from the study.

**Instruments**

**Sex knowledge and attitude questionnaire**

This is a self-administered questionnaire comprising two parts: Knowledge and attitude. The 35-item knowledge-part consists of dichotomous scoring with the maximum attainable score of 35. The attitude part has 20 items, scored on a three-point linear scale (1–3), with maximum obtainable total score of 60. Higher the scores, better the knowledge, and more liberal is the attitude.

**Patient’s treatment satisfaction was evaluated on patient satisfaction questionnaire**

This is a four-item rating scale, each item scored from 0 (not satisfied) to 3 (very satisfied). It is a valid index of the quality of care received in a psychiatric service. Higher scores indicate greater satisfaction.

**International classification of diseases-10**

International classification of diseases-10 criteria were used to make the diagnosis of Dhat syndrome and also comorbid psychiatric disorders including psychogenic/mixed erectile dysfunction and premature ejaculation.

**Symptom severity and level of distress**

Depending on the symptom severity and level of distress in the subjects, the treating psychiatrist rated the severity of Dhat syndrome on a 3-point scale as mild, moderate, and severe.

**Operationalization of outcomes**

Based on the follow-up pattern following outcomes, that is, drop-outs and treatment completers were operationalized. “Drop-outs” were defined as those subjects who had disengaged from the treatment before completion of the treatment. They were further divided into two subgroups: “Early drop-outs,” that is, those who dropped out of treatment after their first visit and “late drop-outs,” those who had ≥1 follow-up visit to the clinic but disengaged from the treatment before completion of the treatment. “Treatment completers” were those who completed the whole course of treatment.

Similarly, based on the level of improvement in the symptoms of Dhat syndrome, treatment outcome was defined as recovered (perceived >75% improvement in symptoms), improved (perceived between 25% and 75% improvement in symptoms) and no change (perceived <25% improvement in symptoms). The outcome was determined on the basis of the treatment record and the information provided by the patient. In case there was a discrepancy, information provided by the patient was given precedence.

**Reason for drop-out**

Reason for drop-out from the treatment was assessed at 6 months after the first visit to the clinic using a single open-ended question, and no further probing was done. For this, patients were asked to list the most important cause for dropping out of treatment. Based on the responses given by the patient’s themes were generated.

**Statistical analysis**

Statistical analyses were performed using the Statistical Package for the Social Science version 14. Descriptive analyses were computed in terms of mean and standard deviation (SD) for continuous variables and frequency with percentage for nominal variables. Pearson’s Chi-square was used to compare categorical variables. ANOVA was used to compare means of multiple groups, and Scheffe’s post-hoc method was used to assess inter group differences.

**RESULTS**

During the study period, 103 patients were diagnosed with Dhat syndrome, of which 97 consented to participate in the baseline assessment. Of these 97 patients, 64 could be contacted at 6 months of follow-up. Of these 64 patients, 23 were categorized as treatment completers, 14 were defined as early drop-outs, and 27 were categorized as late drop-outs.

No significant differences were observed in any of the sociodemographic variables when the subjects who could be contacted (n = 64) were compared with those who could not be contacted (n = 33).

**Sociodemographic profile [Table 1]**

The age of the study sample varied from 17 to 47 years with a mean of 26.75 years (SD - 6.38). About two-third of the study sample were single (65.6%), about three-fifth of them had received formal education up to intermediate level or more (59.4%), and two-third of them were employed (68.8%) and from rural background (64.1%). More than half had a family income of more than rupees 10,000 (56.2%), were from the nuclear family (53.1%) and rural locality (59.4%). Overwhelming majority (79.7%) of them belonged to families of middle or upper socioeconomic status. Nearly three-fourth (73.4%) of these patients were referred to psychiatric service by other medical professionals. When the three groups of subjects based on their follow-up pattern were compared with each other, there were no significant differences in any of the demographic variables. However, higher proportion of treatment completers came
Table 1: Sociodemographic profile of the study group

| Variables                        | Whole group (n=64) | Treatment completer (n=23) | Early dropout (n=14) | Late dropout (n=27) | Comparison of completers versus early dropout | Comparison of completers versus late dropout | Comparison of early versus late dropout |
|----------------------------------|-------------------|---------------------------|---------------------|-------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------|
| Age in years                     | 26.75±6.38        | 27.26±5.30                | 26.71±7.93          | 26.33±6.55        | 0.252                                         | 0.544                                       | 0.164                                 |
| Marital status                   |                   |                           |                     |                   |                                                |                                             |                                       |
| Single                           | 42 (65.6)         | 15 (65.2)                 | 10 (71.4)           | 17 (63.0)         | 0.001#                                        | 0.027                                       | 0.038#                                |
| Married                          | 22 (34.4)         | 8 (34.8)                  | 4 (28.6)            | 10 (37.0)         | −0.218                                        | 1.618                                       | 1.764                                 |
| Education in years               | 11.44±4.42        | 12.26±4.65                | 12.57±3.27          | 10.15±4.55        | 0.568#                                        | 0.809                                       | 3.516#                                |
| Education: < Intermediate        | 26 (40.6)         | 9 (39.1)                  | 3 (21.4)            | 14 (51.9)         |                                              |                                             |                                       |
| Education: > Intermediate        | 38 (59.4)         | 14 (60.9)                 | 11 (78.6)           | 13 (48.1)         |                                              |                                             |                                       |
| Occupation                       |                   |                           |                     |                   |                                                |                                             |                                       |
| Employed                         | 44 (68.8)         | 15 (65.2)                 | 9 (64.3)            | 20 (74.1)         | 0.000                                         | 0.464                                       | 0.085                                 |
| Unemployed                        | 20 (31.2)         | 8 (34.8)                  | 5 (35.7)            | 7 (25.9)          |                                              |                                             |                                       |
| Family income (Indian rupee)     |                   |                           |                     |                   |                                                |                                             |                                       |
| <10,000                          | 36 (56.2)         | 17 (73.9)                 | 7 (50.0)            | 12 (44.4)         | 1.260                                         | 4.428                                       | 0.114                                 |
| >10,000                          | 28 (43.8)         | 6 (26.1)                  | 7 (50.0)            | 15 (55.6)         |                                              |                                             |                                       |
| Family type                      |                   |                           |                     |                   |                                                |                                             |                                       |
| Nuclear                          | 34 (53.1)         | 11 (47.8)                 | 8 (57.1)            | 15 (55.6)         | 0.302                                         | 0.297                                       | 0.009                                 |
| Extended/joint                   | 30 (46.9)         | 12 (52.2)                 | 6 (42.9)            | 12 (44.4)         |                                              |                                             |                                       |
| Locality                         |                   |                           |                     |                   |                                                |                                             |                                       |
| Urban                            | 23 (35.9)         | 7 (30.4)                  | 5 (35.7)            | 11 (40.7)         | 0.000                                         | 0.573                                       | 0.098                                 |
| Rural                            | 41 (64.1)         | 16 (69.6)                 | 9 (64.3)            | 16 (59.3)         |                                              |                                             |                                       |
| Kuppuswamy socioeconomic class   |                   |                           |                     |                   |                                                |                                             |                                       |
| Lower                            | 13 (20.3)         | 6 (26.1)                  | 2 (14.3)            | 5 (18.5)          | 0.188#                                        | 0.415                                       | 0.044#                                |
| Middle/upper                     | 51 (79.7)         | 17 (73.9)                 | 12 (85.7)           | 22 (81.5)         |                                              |                                             |                                       |
| Referred by                      |                   |                           |                     |                   |                                                |                                             |                                       |
| Self/relative                    | 17 (26.6)         | 12 (52.2)                 | 1 (7.1)             | 4 (14.8)          | 5.89***                                       | FE=0.64                                     | 0.000#                                |
| Medical agencies                 | 47 (73.4)         | 11 (47.8)                 | 13 (92.9)           | 23 (85.2)         |                                              |                                             |                                       |

***P<0.001; **P<0.01; *P<0.05; #Chi-square with Yate's correction value. SD – Standard deviation; FE – Fisher's exact value

for psychiatric help on their own compared to those who dropped out early from the treatment.

Clinical profile [Table 2]
The age at onset of symptoms of Dhat syndrome was 21.41 years (SD - 7.5) with a range of 13–37 years. The mean duration of illness at the time of assessment was 5.45 years (SD - 4.31) with a range 3 months to 20 years. Most of the patients had mild/moderate level of distress due to their symptoms. In terms of psychiatric comorbidity, nearly one-third of the patients (32.8%) had at least one psychiatric diagnosis other than that of Dhat syndrome, with anxiety, neurotic and stress related disorders and depressive disorders seen in nearly equal percentage of patients. Nearly one-third (31.2%) had comorbid sexual dysfunction, with premature ejaculation seen in about one-fourth of the cases. Overall about 60% of patients had either a comorbid psychiatric disorder or sexual dysfunction. About 61% of patients were prescribed an anti-depressant, with paroxetine being the most commonly used agent. When compared with each other, no significant difference was observed among the three groups based on the follow-up pattern.

Follow-up pattern and treatment outcome [Table 2]
The mean number of visits over the period of 6 months after first contact varied from 1 to 20 with a mean (SD) of 3.81 (3.06). In terms of outcome, most common outcome reported by the patients was that of no change (45.3%), followed by improved (32.8%) and only one-fifth (21.9%) reported to have recovered from their symptoms of Dhat syndrome with the treatment provided from the clinic. As expected “treatment completers” had significantly higher number of visits as well as for those who recovered/improved from their symptoms of Dhat syndrome when compared to the “early and late drop-out groups.” Compared to “early drop-out” group, those belonging to “late drop-out” group had significantly higher number of visits, but there was no significant difference between the two groups in terms of outcome.

Sexual knowledge and attitude [Table 3]
Information on SKAQ-II obtained at the time of detailed evaluation was available for treatment completers and “late drop-out” group. As evident from Table 3, treatment completers had better knowledge and more positive attitude toward sex compared to the late drop-out group.

Treatment satisfaction [Tables 4 and 5]
Treatment satisfaction was rated telephonically / in person after 6 months of first visit to the psychosexual clinic using PSQ. As is evident from Table 4, only about one-third of the patients were fully satisfied with the various components of treatment encounter and another one-fourth of the patients

Table: Sociodemographic profile of the study group
Table 2: Clinical profile of the study sample

| Variables                        | Mean (SD)/frequency (%) | t-test/Chi-square test |
|----------------------------------|-------------------------|------------------------|
|                                 | Whole group (n=64) | Treatment completers (n=23) | Early dropout (n=14) | Late dropout (n=27) | Comparison of completers versus early dropout | Comparison of completers versus late dropout | Comparison of early versus late dropout |
| Age of onset in years           | 21.41±5.81            | 20.74±4.59             | 23.01±7.08            | 21.15±6.07           | −1.189                                    | −0.265                                    | 0.882                                    |
| Duration of passage of Dhat (years) | 5.45±4.31              | 6.71±4.97             | 4.13±2.75             | 5.05±4.22            | 1.783                                    | 1.285                                    | −0.736                                   |
| Distress due to Dhat            |                        |                       |                       |                      |                                           |                                           |                                          |
| Mild/moderate                   | 51 (79.7)              | 17 (73.9)             | 14 (100)              | 20 (74.1)            | 2.65*                                    | 0.000                                    | 4.37*                                    |
| Severe                           | 13 (20.3)              | 6 (26.1)              | 0 (0.0)               | 7 (25.9)             |                                          |                                          |                                          |
| Comorbid diagnosis              |                        |                       |                       |                      |                                           |                                           |                                          |
| Depression                       | 10 (15.6)              | 6 (26.1)              | 3 (21.4)              | 1 (3.7)              | 0.000*                                   | 3.476**                                   | FE=0.10                                  |
| Anxiety, neurotic and stress related | 11 (17.2)              | 2 (8.7)               | 3 (21.4)              | 6 (22.2)             | FE=0.34                                   | 0.834*                                   | 0.000                                    |
| Comorbid diagnosis              |                        |                       |                       |                      |                                           |                                           |                                          |
| PME                              | 16 (25.0)              | 5 (21.7)              | 4 (28.6)              | 7 (25.9)             | FE=0.7                                    | 0.119                                    | 0.000*                                   |
| ED                               | 9 (14.1)               | 3 (13.0)              | 0 (0.0)               | 6 (22.2)             | FE=0.27                                   | 0.223                                    | 2.083*                                   |
| Number of patients with psychiatric morbidity | 21 (32.8)              | 8 (34.8)              | 6 (42.9)              | 7 (25.9)             | 0.241                                    | 0.464                                    | 0.564                                    |
| Number of patients with sexual dysfunction | 20 (31.2)              | 6 (26.1)              | 4 (28.6)              | 10 (37.0)            | 0.000*                                   | 0.684                                    | 0.038*                                   |
| Number of patients with psychiatric morbidity and or sexual dysfunction | 34 (53.1)              | 11 (47.8)             | 8 (57.1)              | 15 (55.6)            | 0.302                                    | 0.297                                    | 0.009                                    |
| Treatment with psychotropics (anti-depressants/anti-anxiety) | 39 (60.9)              | 12 (52.2)             | 11 (78.6)             | 16 (59.3)            | 1.578                                    | 0.253                                    | 0.791                                    |
| Number of visits                 | 3.81±3.06              | 5.96±3.78             | 1.00±0.00             | 3.44±1.48            | 4.87***                                   | 3.182**                                   | −6.157***                                |
| Status of patient (self-report)  |                        |                       |                       |                      |                                           |                                           |                                          |
| Recovered/improved               | 35 (54.7)              | 23 (100)              | 1 (7.1)               | 11 (40.7)            | FE <0.001***                               | 17.41***                                  | 3.53*                                    |
| No change                        | 29 (45.3)              | 0 (0.0)               | 13 (92.9)             | 16 (59.3)            |                                          |                                          |                                          |

***P<0.001; **P<0.01; *P<0.05; Chi-square with Yate’s correction value. *Of the 10 patients with depressive disorder 6 patients had moderate depression without somatic symptoms, 3 patients had dysthymia and one patient had history of severe depression but was current in remission; **Of the 11 patients with anxiety disorder 7 were diagnosed with anxiety NOS, 1 patient had panic disorder, 1 patient had generalized anxiety disorder, 1 patient had obsessive compulsive disorder with anxiety NOS and 1 patient had obsessive compulsive disorder with generalized anxiety disorder; ***Fluoxetine and escitalopram was used in 3 patients each, paroxetine was used in 16 patients, sertraline was used in 7 patients, 5 received bupropion, 2 received agomelatine, and 1 patient each received mirtazapine and clomipramine. ED – Erectile dysfunction; PME – Premature ejaculation; FE – Fisher’s exact value; SD – Standard deviation; NOS – Not otherwise specified.

Table 3: Sexual knowledge and attitude questionnaire scores of treatment completers and late drop out group

| Variables                       | Mean (SD)/frequency (%) | t-test/Chi-square test value |
|---------------------------------|-------------------------|-----------------------------|
|                                 | Whole group (n=50) | Treatment completers (n=23) | Late dropout (n=27) | |
| SKAQ-IL-knowledge               | 12.52±4.89            | 14.95±4.09                 | 10.63±4.67          | 3.353***                                  |
| SKAQ-II-attitude                | 34.79±5.91            | 38.95±4.05                 | 31.56±5.06          | 5.464***                                  |

***P<0.001; **P<0.01; *P<0.05; SKAQ – Sex knowledge and attitude questionnaire; SD – Standard deviation.

were partially satisfied. Level of satisfaction was highest for treatment completers and those who dropped out early had the highest level of dissatisfaction.

For comparison purposes, those who had partial or complete satisfaction were clubbed together, and those with a partial dissatisfaction and complete dissatisfaction were clubbed together. It was seen that “treatment completers” had significantly better satisfaction on all the four components of treatment satisfaction when compared to “early drop-outs” and “late drop-outs.” When the “early drop-outs” and “late drop-outs” groups were compared, no significant difference was seen. These results are shown in Table 4.

Reasons for drop-out

The most common reasons given by those who dropped out early were “not able to spare time for consultation” (21.4%) and “not prescribed medications” (21.4%). Other reasons included “doesn't think it is a psychiatric problem,” “don't want treatment from a psychiatrist” and “had to wait too much for his turn.” The most common reason given by those belonging to “late drop-out” group was “no improvement in symptoms” of Dhat syndrome with treatment received at the clinic (40.7%). Other common reasons given by the patients of late drop-out group were - “not able to spare time for consultation,” “not satisfied with the treatment/therapist” and “do not want to be treated by a psychiatrist.” Other details are shown in Table 5.

DISCUSSION

The aims of this study were to examine the treatment offered, follow-up rates, outcome of illness/treatment, satisfaction with the treatment received and the reason for “drop-out” from the treatment. To the best of our knowledge, this is the first such study on patients with Dhat syndrome in which patients who disengaged from the treatment before completion of treatment were prospectively contacted and an effort was made to understand their level of treatment satisfaction and reason for disengagement from treatment. Although, the study sample looks modest and included 64 patients, yet the sample size of this study was more than most of the previous studies on Dhat syndrome.[9-10,13,14]
Table 4: Level of satisfaction with the services provided to the study group as per the PSQ

| Reason of dropout | Fully satisfied (n=23) | Partial satisfied (n=14) | Partial unsatisfied (n=14) | Fully unsatisfied (n=7) |
|-------------------|------------------------|--------------------------|---------------------------|------------------------|
|                   | Mean (SD) | Frequency (%) | Mean (SD) | Frequency (%) | Mean (SD) | Frequency (%) | Mean (SD) | Frequency (%) |
|                   | Whole group (n=64) | Treatment completers (n=23) | Early dropout (n=14) | Late dropout (n=27) | Comparison of completers versus early dropout | Comparison of completers versus late drop out | Comparison of early versus late drop out |
| Fully satisfied   | 22 (34.4) | 21 (91.3) | 0 (0.0) | 1 (1.6) | FE <0.001*** | 21.942*** | 0.038* |
| Partial satisfied | 15 (23.4) | 2 (8.7) | 4 (28.6) | 9 (14.1) |
| Partial unsatisfied | 16 (25.0) | 0 (0.0) | 2 (14.3) | 14 (21.9) |
| Fully unsatisfied | 11 (17.2) | 0 (0.0) | 8 (57.1) | 3 (4.7) |

Table 5: Reason of drop-out

| Reason of dropout | Frequency (%) |
|-------------------|---------------|
|                   | Early dropout group (n=14) | Late drop out group (n=27) | Total drop outs (n=41) |
| No improvement with treatment | 0 (0.0) | 11 (40.7) | 11 (26.8) |
| Not able to spare time for consultation | 3 (21.4) | 4 (14.8) | 7 (17.1) |
| Not satisfied with treatment/therapist | 1 (7.1) | 4 (14.8) | 5 (12.2) |
| Doesn’t think it is mental health problem | 2 (14.3) | 0 (0.0) | 2 (4.9) |
| Doesn’t want treatment from mental health professional | 2 (14.3) | 4 (14.8) | 6 (14.6) |
| Felt that the doctor didn’t understand the problem | 1 (7.1) | 1 (3.7) | 2 (4.9) |
| Had to wait too much for his turn | 2 (14.3) | 0 (0.0) | 2 (4.9) |
| Medications were not prescribed | 3 (21.4) | 0 (0.0) | 3 (7.4) |
| Change in therapist | 0 (0.0) | 2 (7.4) | 2 (4.9) |
| Distance | 0 (0.0) | 1 (3.7) | 1 (2.4) |

The age of onset and the duration of passage of Dhat prior to seeking help in the present study is typical of that reported for patients with Dhat syndrome in the previous studies.[6,14] The comorbidity profile in terms of prevalence of anxiety is also within the reported range.[3,6,7,22-24] However, the prevalence of comorbid depression is somewhat less when compared to as reported in earlier studies.[3,6,7,22-24] In the current study, sexual dysfunction in the form of premature ejaculation and erectile dysfunction was almost similar to the range reported in the literature.[14] About 60% of the patients were prescribed anti-depressants. Previous studies have also reported that antidepressants, anxiolytic medications, and vitamin supplements are commonly prescribed to the patients with Dhat syndrome.[7,14] However, it is important to remember that the prescription of anti-depressants could also be influenced not only by the comorbid psychiatric diagnosis and but also sexual dysfunction. Paroxetine, the most commonly prescribed anti-depressant in this group, is reported to be associated with delayed ejaculation, hence, prescribed for comorbid premature ejaculation as well.[30] Findings of the present study reveal that about one-fifth (21.9%; 14 out of 64) drop-out of treatment after

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their first visit to the psychosexual clinic and slightly less than half (42.2%; 27 out of 64), drop-out from the treatment after a few visits. Taken together about two third of the patients drop-out of treatment before completion of the therapy. Only 36% (n = 23 out of 64) of the patients with Dhat syndrome complete their treatment. None of the demographic and the clinical variables included in the study were found useful in predicting which patients would drop-out. Only variable which was significantly different between those who “dropped out early” and “treatment completers” was the source of referral. Those who were referred to psychiatric services by other professionals dropped-out from the treatment after the initial visit. Therefore, it is important that the psychiatrist attending the patient of Dhat syndrome, especially those who are referred from other specialists, should devote enough time to provide information to the patient about the current understanding of the Dhat syndrome along with the role of various treatment modalities, both physical and psychological. Another important finding, although negative, suggests that treatment drop-out and treatment response is not determined by the comorbid psychiatric disorder and sexual dysfunction, neither by the fact that patients are prescribed medications or not. This finding is contradictory to the findings of Bhatia and Malik who reported best response in those receiving anti-anxiety or anti-depressant drugs while those receiving psychotherapy showed minimal response.

Although we did not have information about the sexual knowledge and attitude of the “early drop-out” group, findings of other two groups reveal that those with poor sexual knowledge and negative attitude toward sexuality drop-out before completing the treatment. Thus, the clinicians should devote adequate time for assessment of sexual knowledge and attitude toward sexuality in patients with Dhat syndrome and should address them adequately to possibly improve the treatment outcome.

Our study also suggests that those patients who continue with the treatment improve with the combination of pharmacotherapy and psychological intervention or psychological intervention alone. Possibly only factor which determines the outcome positively is the ability to retain the patient into treatment net. It is, therefore, very important to understand the reasons for drop-out from the treatment. Most of the patients, who “drop-out early” from the treatment, do not consider Dhat syndrome as a mental health problem or a problem which needs to be tackled by a mental health professional.

The reason given by the patients for discontinuing treatment, provide a lot of insight as to how the services should be organized for these patients. One of the most common themes reported by the patients who dropped out of treatment early was lack of prescription of medications. Although, the present study demonstrates that at the end prescription of medication does not influence the follow-up pattern, but it is important to note that for some patients getting a prescription may be important. Getting a prescription possibly validates the medical model for their symptoms. Accordingly, the treating therapist should enquire from the patients about their expectation from the treatment and those patients who actively voice the need for a medication may be prescribed a placebo like a vitamin supplement. This can possibly help in holding the patient in the treatment net. Other two themes reported by the patients who dropped out early from the treatment and inter-related to each other were: “Not able to spare time for consultation” and “had to wait too much for the turn.” These reasons for drop-out reemphasize the need to reorganize the services for these patients in order to make these more patient friendly. Other inter-related themes for early drop-out by the patients were: “Do not think it is a psychiatric problem,” doesn’t want treatment from a psychiatrist” and “doctor didn’t understand the problem.” This suggests that many patients with Dhat syndrome do not consider their problem to be of psychological origin. These themes could also possibly reflect the stigma associated with seeking treatment from a mental health professional. There is a need to acknowledge the existence of stigma and for the reorganization of services. One of the possible solutions could be having multidisciplinary specialized clinics which have physician, endocrinologist, urologist, and psychiatrist working under one roof. This could help in providing services to these patients in an environment which is not considered stigmatizing to the patient. One of the themes which was more prevalent in patients who dropped out late from the treatment was “lack of improvement.” This reason requires further evaluation with regard to the expectation of patients from the treatment. Many other stated reasons like the etiological model offered, therapist related factors, etc., could have led to dropping out from the treatment. Another theme reported by some of the patients was “change of therapist” and this underscores the importance of the therapeutic relationship and continuity of care in the hand of a single therapist.

To conclude, in the present study, about two-third of the patients with Dhat syndrome dropped out of the treatment. The identified demographic and clinical factors did not predict the patients that were going to drop-out of the treatment. The reasons for drop-out from the treatment suggest that there is a need to reorganize the services for these patients and to understand their expectations from the treatment.

The study was limited to a clinic attending population, hence, cannot be generalized to the general population. The study sample was relatively small. We did not evaluate in detail the patient-related factors, therapist-related factors and external factors which could have influenced the treatment outcome.
The study also did not evaluate the pathways of care prior to contact with our services and the path followed by the patients after dropping out of the treatment. The study also did not evaluate the expectations of the patients, their etiological models etc., which are known to influence the treatment adherence. Evaluation of reasons for drop-out was also limited to a single question. Future studies should attempt to overcome these limitations.

REFERENCES

1. Avasthi A, Grover S, Jhiriwal OP. Dhat syndrome: A culture-bound sex related disorder in Indian subcontinent. In: Gupta S, Kumar K, editors. Sexually Transmitted Infections. 2nd ed. New Delhi, India: Elsevier; 2012. p. 1225-30.
2. Jilek WG. Culturally related syndromes. In: Gelder MG, Lopez-Iber JJ, Andreason N, editors. New Oxford Textbook of Psychiatry. Vol. 1. Oxford: Oxford University Press; 2000. p. 1061-6.
3. Chadda RK, Ahuja N. Dhat syndrome. A sex neurosis of the Indian subcontinent. Br J Psychiatry 1990;156:577-9.
4. Nakra BR, Wig NN, Varma VK. A study of male potency disorders. Indian J Psychiatry 1977;19:13-8.
5. Behere PB, Natraj GS. Dhat syndrome: The phenomenology of a culture bound sex neurosis of the orient. Indian J Psychiatry 1984;26:76-8.
6. Bhatia MS, Bohra N, Malik SC. ‘Dhat’ syndrome – A useful clinical entity. Indian J Dermatol 1989;34:32-41.
7. Bhatia MS, Malik SC. Dhat syndrome – A useful diagnostic entity in Indian culture. Br J Psychiatry 1991;159:691-5.
8. De Silva P, Dissanayake SA. The loss of semen syndrome in Sri Lanka: A clinical study. Sex Marit Ther 1989;4:195-204.
9. Dewaraja R, Sasaki Y. Semen-loss syndrome: A comparison between Sri Lanka and Japan. Am J Psychother 1991;45:14-20.
10. Mumford DB. The ‘Dhat syndrome’: A culturally determined symptom of depression? Acta Psychiatr Scand 1996;94:163-7.
11. Khan N. Dhat syndrome in relation to demographic characteristics. Indian J Psychiatry 2005;47:54-7.
12. Khan N, Kausar R, Chaudhary HR. Demographic characteristics and implications of Dhat syndrome in Pakistan. Indian J Clin Psychol 2011;38:69-78.
13. Singh G. Dhat syndrome revisited. Indian J Psychiatry 1985;27:119-22.
14. Dikav V, Aggarwal N, Gupta S, Jadhavi R, Singh K. Depression in Dhat syndrome. J Sex Med 2008;5:841-4.
15. Raj AJ, Prasadanaar PS, Raguram R. Cognitive behaviour therapy in Dhat syndrome: A case study. Indian J Clin Psychol 1998;25:211-7.
16. Salam KP, Sharma MP, Prakash O. Development of cognitive-behavioral therapy intervention for patients with Dhat syndrome. Indian J Psychiatry 2012;54:367-74.
17. World Health Organization. The ICD-10 Classification of Mental and Behavioral Disorders; Clinical Description and Diagnostic Guidelines. Geneva: WHO; 1992.
18. Avasthi AK, Varma VK, Nehra R, Das K. Construction and standardization of a sex knowledge and attitude questionnaire (skaq), in simple hindi, for north Indian population. Indian J Psychiatry 1992;34:24-7.
19. Avasthi A, Gupta N. Manual for standardized Management of Single males with sexual Disorders. Chandigarh: Marital and Psychosexual Clinic, Department of Psychiatry, PGIMER; 2002.
20. Shipley K, Hibborn B, Hansell A, Tyrer J, Tyrer P. Patient satisfaction: A valid index of quality of care in a psychiatric service. Acta Psychiatr Scand 2000;101:330-3.
21. Grover S, Avasthi A, Anuja J, Shankar G, Mohan M R, Nehra R, et al. Comprehensive questionnaire for assessment of Dhat syndrome: Development and use in patient population. J Sex Med 2014;11:2485-95.
22. Bagadia V, Dave K, Pradhan P, Shah L. A study of 258 male patients with sexual problems. Indian J Psychiatry 1972;14:14351.
23. Bhatia MS. An analysis of 60 cases of culture bound syndromes. Indian J Med Sci 1999;53:149-52.
24. Deb KS, Balhara KP. Dhat syndrome: A review of the world literature. Indian J Psychol Med 2013;35:326-31.
25. Jadhav S. Dhat syndrome: A re-evaluation. Psychiatry 2004;3:146.
26. Waldinger MD, Olivier B. Utility of selective serotonin reuptake inhibitors in premature ejaculation. Curr Opin Investig Drugs 2004;5:743-7.

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