

## Frequency of Djinnati Syndrome among Inpatient Admissions at Baharan Psychiatric Hospital in Zahedan, Iran

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Article information	Abstract
<p>Article history: Received: 26 May 2013. Accepted: 10 Sep 2013 Available online: 13 July 2014 ZJRMS 2014 Oct; 16(Suppl 1): 55-59</p> <p>Keywords: Culture-bound syndrome Dissociative disorder trance Possession state</p> <p>*Corresponding author at: Department of Psychiatry, Zahedan University of Medical Sciences, Zahedan, Iran. E-mail: kianpoorm@gmail.com</p>	<p><b>Background:</b> A culture-bound syndrome common in Baluchistan is Djinnati that is classified as trance and possession state, a sub-class of dissociative disorders NOS, in DSM IV-TR. The present study aims to determine the frequency of Djinnati syndrome among in-patients at Baharan psychiatric hospital in Zahedan, Iran.</p> <p><b>Materials and Methods:</b> In this descriptive study, the statistical community includes all patients (N=773) who were admitted in Baharan psychiatric hospital during a 6 months period. After considering the inclusion and exclusion criteria, 150 subjects (61 males and 89 females) were selected. Semi-structural interview and Dissociative Experience Scale (DES) questionnaire were performed for them. Spearman's rank correlation coefficient, <math>\chi^2</math>, and <i>t</i>-tests were employed for analysis of data in SPSS-18.</p> <p><b>Results:</b> Frequency of Djinnati syndrome among patients admitted in this referral psychiatric hospital was 4.1% and this syndrome showed a significant dominance in female sex (M/F=1/3). There was also a positive and significant correlation between child abuse and dissociative experiences including Djinnati.</p> <p><b>Conclusion:</b> The study has shown that dissociative disorders NOS, in the form of trance and possession states (such as Djinnati), are not rare especially in the eastern parts of Iran and among poor and young women. It is important to define Djinnati syndrome in this region and prepare medical students and psychiatric residents for diagnosing and managing this condition. Its relationship with child abuse should be considered in preventive medicine.</p>

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### Introduction

Considering cultural issues is a necessity in psychology and psychiatry since the values and behavioral patterns of any culture is specific for that culture. There are also psychopathological syndromes, especially in non-western societies that do not fit exactly the two dominant illness classifying systems of ICD-10 and DSM IV TR. Culture bound syndromes, as a valid representative for study in cultural psychiatry, is a set of behaviors and experiential phenomena in a particular socio-cultural context that are recognized as illness behavior by most participants in that culture [1]. Most of the defined and known culture bound syndromes have been classified under category of dissociative disorders and have been seen as dissociative phenomena. In the psychiatric and anthropological literature, two forms of dissociative phenomena are identified to be related to culture bound syndromes: possession trance and dissociative trance. Possession trance involves the "replacement of customary sense of personal identity by a new identity", while during dissociative trance, the loss of customary identity is not associated with the appearance of alternate identities [2].

During the 1980s many researchers and clinicians' focus of interest returned back to diagnosis, treatment and study

of dissociative disorders. Several studies since then suggested that dissociative disorders may be more common in general and clinical populations than previously suspected [3, 4]. Ross et al. showed in a study on a random sample of 1055 residents of Winnipeg in Canada that 5% of general population had DES score of more than 30 which is suggestive of high prevalence of dissociative disorders [3]. Another similar study showed that 6.3% of a randomly selected sample of 1028 individuals suffered from three or more frequently occurring dissociative symptoms [5]. The study also showed that the rate of physical abuse was 5 fold and sexual abuse was 2.5 times higher in people frequently experiencing dissociative symptoms than others [5]. The rate were also unexpectedly high in clinical populations, Foote et al. in a clinical sample of 82 outpatients found that 29% had a dissociative disorder among whom only 5% had been diagnosed properly [4]. In two other studies in Turkey and Holland the rate of dissociative disorders in psychiatric inpatient ward was 10.2% and 8% respectively [6, 7].

Dissociative disorders are more prevalent in developing countries and also they seem to be the disorder of younger age [8-10]. Thapa and Shyangwa found in a study in

Nepal that the mean age of those with dissociative convulsion was 18.8 years, while it was 20.6 years in dissociative stupor [8]. Shah in a similar study confirmed the results and also showed that the disorder is more prevalent in female sex and those with lower socio-economic and educational status [9]. Positive history of stressful life events was a constant finding in these studies [8-10]. It has been postulated that dissociation is a defense against psychosocial stresses that cannot be overcome by patient. In the most typical form, dissociative identity disorder (DID) and its possession form (as classified in DSM V [11]), stereotypical behavior allows for release of repressed impulses and angry feeling, and the catharsis alleviates anxiety and tension [12].

Possession phenomenon was rightly classified as a form of DID in DSM V since many authors declared that Possession states and DID are variants in a dissociative spectrum with obvious similarities. The differing psychopathology of the two disorders seems to be mostly due to socio-cultural differences in developing and developed countries [13-15]. DID have a prevalence of approximately 1% in general population, and has been found in 1% to 20% of psychiatric inpatients and outpatients, depending on the sample [16]. Igreja et al. in an epidemiological study on a population of 941 adults after civil war in Mozambique found that 18.6% of individuals were possessed at least by one spirit [2]. Trace and possession states like Djinnati are classified as dissociative disorders not otherwise specified (DDONS) in DSM IV-TR.

Epidemiological studies in clinical populations, inpatients and outpatients, have shown that DDONS is the most prevalent dissociative disorder in these populations with a prevalence of about 9.5% [16]. Djinnati is a possession state known in Sistan and Balouchestan province of Iran [14]. Although it is mostly managed by local healers (mullah), but more and more cases of Djinnati are referring to mental health providers recently. The characteristics of Djinnati are relatively similar to other possession states all around the world, especially eastern countries. As many authors have declared, possession experiences in any religion reflect the particular assumptions of that religion [17]. Djin is a creature of god that Muslims believe that although not visible, but is living in our world and can affect our life in different ways.

During attacks of being possessed by Djin the patient develops impaired consciousness, agitation, incoherent speech, capturing the identity of the Djin, and sometimes hallucination and aimless behavior. The patient is most of the times amnesic about what has happened during the attack, and it is almost always accompanied by a history of stressful life events, especially during childhood [14]. Bakhshani et al. studied rural areas of Balouchestan and found that the prevalence of Djinnati in general population is 0.5% and it is 1.03% among women [18]. The present study aims to determine the frequency of Djinnati syndrome among inpatients at Baharan psychiatric hospital in Zahedan, the capital of Sistan and Balouchestan province of Iran.

## Materials and Methods

This descriptive study was conducted on all patients who were admitted to inpatient ward of Baharan psychiatric hospital of Zahedan, Iran, during a 6 month period from Oct-2011 to Apr-2012. Of the 773 patients who were admitted, 150 individuals who were admitted for the first time and did not have the exclusion criteria stayed in the study. Exclusion criteria were, being in the age of 60 years or older, having mental retardation, definite diagnosis of a chronic psychotic or mood disorder, substance use disorder, or a major medical problem (e.g. Diabetes Mellitus), and receiving ECT during last 6 months. Finally 61 male and 89 female patients constitute the study sample.

After getting verbal consent a psychologist had a semi-structural interview with each patient after admission. In the interview after gathering identification data and exploring chief complaint and present illness and brief mental status examination the interviewer asked close questions regarding dissociative disorder and especially the possession state of Djinnati. The symptoms of attacks of possession that were questioned about, include altered consciousness, screaming, strong urge for escaping, muteness, inappropriate laughing and crying, altered speech coherency, tone and voice and even language, and memory loss, and taking the new identity of Djin, based on descriptions of Djinnati [14, 18]. The semi-structural interview also had questions regarding stressful life events and specifically child verbal, physical, and sexual abuse. In the next step the patient filled the dissociative experience scale (DES) questionnaire at the presence of another psychologist who had not seen the patient before.

DES is a widely used 28-item self report questionnaire for screening of dissociative experiences including memory loss, depersonalization, derealization, and absorption. DES test describes 28 common dissociative experiences and the individual is asked to rate the frequency of each condition if she/he has experienced it in a scale with 10 percentage intervals from 0% (never) to 100% (always). The mean score of the 28 items represent the score of individual in the test, scores higher than 30 is highly suggestive of the presence of a dissociative disorder [19] although cut of points of 15 and 20 has been employed in different studies as well [19]. DES was designed in mid-80s by Bernstein and Putnam and multiple studies showed high validity and reliability [20]. The Persian version's test-retest reliability was 96% and measuring internal reliability by Cronbach's alpha showed a good reliability (96%) as well [21]. Data were analyzed in SPSS-18 program and Spearman's rank correlation coefficient,  $\chi^2$  test, and *t*-test were applied for describing the results.

## Results

The study sample constitutes of 150 patients who were admitted for the first time, including 89 (59.3%) females and 61 (40.7%) males. The mean age of study group was 31.19 years, and 80 patients (51.5%) were illiterate or

primarily educated (less than 6 grades). Ninety of the 150 patients (60%) were from very low socioeconomic class, and 96 (64%) of study sample were married. All patients were religious Muslims. Results of the semi-structural interview of the study sample (N=150), confirmed that from 773 patients who were admitted in Baharan psychiatric hospital during 6 months period of the study, 32 people were diagnosed as having Djinnati syndrome. In other words 6 months rate of Djinnati among people admitted in this hospital was 4.1%. From 32 patients with Djinnati 27 (85%) were female and 5 (15%) were male. Fifty percent of them were illiterate or primarily educated, and 15 (47%) were below 30 years of age with overall mean age of 30 years old. Ninety percent (N=29) of Djinnati patients were from very low socio-economic class that was significantly ( $p<0.001$ ) different from those with diagnoses other than Djinnati syndrome (51.7%).

From 32 Djinnati patients, 21 (61%) were married and among them 11 (34.4%) had unwanted marriage. Fifty six percent of Djinnati patients had positive family history of the syndrome, against only 16% of non-Djinnati patients. Table 1 shows distribution of history of the most prevalent abuse among studied patients. Comparing the 2 groups with  $\chi^2$  test showed a significant difference regarding sexual abuse ( $p<0.001$ ). To interpret the DES score of patients they were ranked in 4 groups of scores (0-15), (16-30), (31-40), and (40 and more). Using Spearman's rank correlation coefficient statistical method, it was shown that there was a positive association between history of child abuse and ranking of DES score of patients. It means that those with history of child abuse had higher scores in DES. Student's  $t$ -test was performed to compare the 2 groups' mean score of patients in DES (Table 2) that showed significantly higher DES mean score among Djinnati group. To evaluate internal reliability of Persian version of DES, split half and even-odd correlation tests were done that showed Cronbach's alpha of 0.83 and 0.899 respectively that confirms reliability of the test in study population.

**Table 1.** Distribution of positive history of abuse in Djinnati and non-Djinnati patients

	Djinnati Group N (%)	Non-Djinnati Group N (%)
No history of abuse	4 (12.5)	72 (61)
History of physical abuse	8 (25)	29 (24.6)
History of verbal abuse	2 (6.3)	3 (2.5)
History of sexual abuse	18 (56.3)	14 (11.9)

**Table 2.** Comparing rate of dissociative experiences of the two groups

Group	Mean $\pm$ SD	$t$	df	$p$ - Value
Djinnati (N=32)	39.375 $\pm$ 15.687	5.316	148	0.001
Non-Djinnati (N=118)	20.957 $\pm$ 17.804			

The most frequent symptoms among patients diagnosed as Djinnati were aimless behavior (81.3%), somatization (81.3%), agitation and aggressive behavior (75%), and screaming during episodes of being possessed (65.6%). All of 65.6% of patients had positive history of suicidal attempt and 59.4% of them reported hallucination and

46.9% of patients had experienced depersonalization during times other than Djinnati attacks.

## Discussion

The results declare that Djinnati syndrome as a culturally dependent dissociative disorder is not rare in Sistan and Baluchistan province of Iran. The 6 months prevalence of Djinnati among inpatient ward of Zahedan psychiatric hospital is 4.1%. The rate we found is about half the prevalence that Dell study [22] has mentioned in his review for DDNOS in both inpatient and outpatient samples (9.5%) which is expectable since many of the patients do not need to hospitalization. We also considered only first admissions and ignored probable misdiagnosis of patients who were admitted for the second time or more, whereas many authors have found high frequency of misdiagnosis among these patients [4]. Those with co-morbidity were excluded from our sample as well, while there are high rates of co-morbidity of dissociative disorders with other psychiatric conditions, especially substance use disorder [21, 23-25]. Studies of Tutkun et al. [6] in Turkey and Friedl and Draijer [7] in Netherland and Ross et al. [26] also confirm our study and show relatively similar rates (5.4%, 2%, and 5% respectively) for DID for inpatient populations. Dissociative disorders and especially DID has been shown to be more prevalent among women in many studies with female to male ratio of 2:1 up to 9:1 [25, 27, 28]. In present study the ratio was 5.4:1 that is in the range that other studies reached, although many of the researches used DES score for diagnosing dissociative disorder, and none of the previous studies had focused on a specific trance and possession state such as Djinnati. The present study confirms the fact uttered by many authors that DDNOS is a disorder of young and poor [9]. We found that 47% of Djinnati patients had ages below 30 years and 90% of them were from low socioeconomic class, the rate that was meaningfully different from non-Djinnati patients.

Having 34.4% of patients to be married in a very young age with force of family and not their own choice confirms Kianpoor and Rhoades's explanation [14] that marriage in a very young age with force can acts as an actually child sexual abuse that leads to development of DDNOS such as Djinnati syndrome. On the other hand, statistically meaningful difference between the two Djinnati and non-Djinnati groups regarding positive family history of Djinnati with percentages of 56 against 16 is in favor of the role of both biological factors and also the social learning models for explaining the etiological paths for development of the disorder. The relationship between the religious context of the society or more specifically orthodox Muslims' belief on influential role of Djin on our life, and having Djinnati syndrome confirms other researchers finding that the presentation of possession experiences in any society reflects the religious beliefs of that culture [17]. The mean score of DES in Djinnati patients was about 40, which is identical to the cut-off point of DES for high probability

of the presence of DID [19]. The finding is less than what Ellason and Ross [29] found in their study among DID patients ( $52.4 \pm 19.1$ ). The difference can be due to the difference of study groups and the fact that DES test is designed for identifying the main dissociative disorders and lacks questions regarding specific trance and possession states such as Djinnati. However, the mean score of Djinnati patients is meaningfully higher than those of Non-Djinnati patients, the finding that reveals relative validity of DES for the condition.

The study showed significant relationship of Djinnati syndrome with child abuse and it showed that higher score in DES is suggestive of more probability of positive history of child abuse among Djinnati patients. This result is similar to what many other researchers declared [5, 6, 16]. Although there are also articles that have revealed that there is no consistent relationship between DID and child abuse [30]. These contradictory results can be attributed to different approaches to dissociative disorders. Many authors believe that DID is an iatrogenic complication of psychotherapy and nature of doctor-patient relationship [30]. Other than trance state that is a constant symptom in episode of being captured by the Djin, the most common symptoms during Djinnati attacks were aimless behavior, agitation and aggressiveness, screaming, hallucination. The most common symptoms of patients while not in Djinnati attacks were somatization

and depersonalization. Our study shows that the presentation of the syndrome seems to confirm the description of Kianpoor and Rhoades [14] from Djinnati in their case presentation. The author believe that the main problem in this study was limitation of study to those patients who were admitted for the first time, however chronic and known patients in psychiatric hospital cannot be reliable for exploring the presentation of their first episode of illness. Djinnati and other dissociative disorders should be considered by physicians in this region as a relatively frequent psychiatric condition. It is recommended also that those providing community health programs and services consider child abuse as a serious health problem that can end to major mental problems. More researches are needed to explore symptomatology, epidemiology, and treatment of culture bound dissociative conditions such as Djinnati.

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### Authors' Contributions

All authors declare that they have no conflict of interest.

### Conflict of Interest

The authors declare no conflict of interest.

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