

## **Assessment of Prevalence of the Bipolar Disorder (Phase of Mania) among Patients Admitted to Psychiatric Wards at Zare Hospital in Sari, Iran During Lunar Months from 2003-2006**

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**Abstract:** The aim of the study is to evaluate the frequency of bipolar disorder among inpatients of the psychiatric wards of Zare Hospital in the fasting month (Ramadan) compared with other lunar months. The sample was comprised of all the Mania patients admitted to the psychiatric wards of Zare Hospital with diagnosis of bipolar mood disorder (mania phase) in Sari, Iran, during the lunar month from 2003-2006. We found that there was no significant difference between the numbers of patients hospitalized in the month of Ramadan and other lunar months, however, the most frequent admission rate of patients with affective disorder, was in the month of Shavaal, namely the first month following Ramadan. Comparison of sleep patterns among lunar months, showed that prevalence of sleep loss in the month of Shavval was more than any other Lunar months and there was a significant difference statistically ( $p < 0.01$ ). It is necessary for the patients to be oriented regarding healthy sleeping prior to the beginning of the ninth and tenth lunar months.

**Key words:** Bipolar disorders • Mania • Lunar months • Ramadan • Sleep • Iran

### **INTRODUCTION**

Bipolar disorder is a recurrent disease that allocates more than 50% of the beds in psychiatric hospitals by itself [1]. There is more than one episode of mania in 45% of patients. Although, 45% of patients have a good condition, they are involved in the recurrence of the disease for several times. There is an incomplete rate of remission in 30% and it becomes chronic in 10% of cases. There are chronic symptoms along with significant social regression, in one third of all bipolar affective disorder patients [1, 2].

Sleep deprivation is one of the etiologic factors reported during recurrent episode of mania [3-6]. 25-60% of bipolar patients with episode of mania had experienced a period of irregularity in their sleep patterns. The irregularity in sleep pattern might be related to simple

causes such as, sleeping late due to watching television at night, or insomnia because of severe disease of family members [3]. Consequently, healthy sleeping is recommended in order to prevent the episode of mania [1-3]. In fact, sleep deprivation has been known as a manicogenic factor in mania [3]. In one study, the effect of sleep deprivation on induction of therapeutic response in depressive phase of bipolar patients was proved [7]. Due to religious ceremonies during the month of Ramadan and markedly alteration, in sleep routines, we have decided to evaluate the prevalence of bipolar disorder among inpatients from the psychiatric wards of Zare Hospital in the month of Ramadan, in comparison with other lunar months for four successive years. Presently, there has been no research conducted in this field, thus, we intended to study this subject. If there is a significant difference between admission numbers of

manic patients in the month of Ramadan with other lunar months, education and management of healthy sleeping will be necessary for patients and their families, prior to the month of Ramadan.

## MATERIALS AND METHODS

In this descriptive study, we hypothesized that the prevalence of bipolar disorder (phase of mania) among inpatients of psychiatric wards was significantly higher during the month of Ramadan than the rest of the year. The studied population was all manic patients admitted the psychiatric ward of Zare Hospital in Sari, Iran during 2003-2006. This research was performed during four stages:

- We assessed all accessible references related to recurrence of manic phase, in patients with affective disorder and sleep deprivation.
- The hypothesis was formed according to assessed references.
- Referring to archives of the Zare Hospital, we reviewed the charts of admitted patients with diagnosis of bipolar disorder (manic phase) in 2003-2006. The following variables were recorded: age, sex, educational level, married status, drug consumption and regular or irregular sleep patterns. According to the lunar calendar, we converted solar date (1382-1385) of admission of patients to lunar date (1424-1428).
- Data was analyzed using SPSS software 11. We used quadrants test and T- test to compare the prevalence of bipolar patients (manic phase) during lunar months in 2003-2006.

## RESULTS AND DISCUSSION

We studied 599 records of inpatients with bipolar affective disorder (manic phase) in Zare Hospital during 2003-2006. There were 346 (57/76%) records which belonged to male patients, while 250 (42/24%) belonged to female patients. All admitted patients during different months, were matched as a viewpoint of education, job, married status and family history of bipolar disorder. The highest admission rate was in the month of Shavval (9.8%). The most common age group was 20-29 years (33.70%). The lowest admission rate was the third lunar month (Rabiosani) (8.6%). The sleep pattern of patients was compared in different lunar months. Sleep loss was reported to be higher during the month of Shavval than the other lunar months. The difference was statistically significant ( $p < 0.01$ ,  $\chi^2 = 78.81\%$ ). Prevalence of the patients admitted with bipolar disorder in Arabic months was shown in Figure 1.

There have been several studies conducted regarding the effects of lunar months, especially the month of Ramadan, on psychiatric health. The result of the research has shown that the month of Ramadan has a positive effect on self – respect as a part of psychiatric health [8]. Other studies have shown that the rate of anxiety and depression decreased among Muslims during the month of Ramadan [9-12]. In another study, the psychiatric health statuses of college students were compared before and after the month of Ramadan. There was a significant improvement in the psychiatric health status of subjects following the month of Ramadan [13]. In one study, the rate of suicide, decreased significantly during the month of Moharam (the first Arabic lunar month), Safar (the second Arabic lunar month) and Ramadan in comparison with the rest of Arabic lunar months [14].

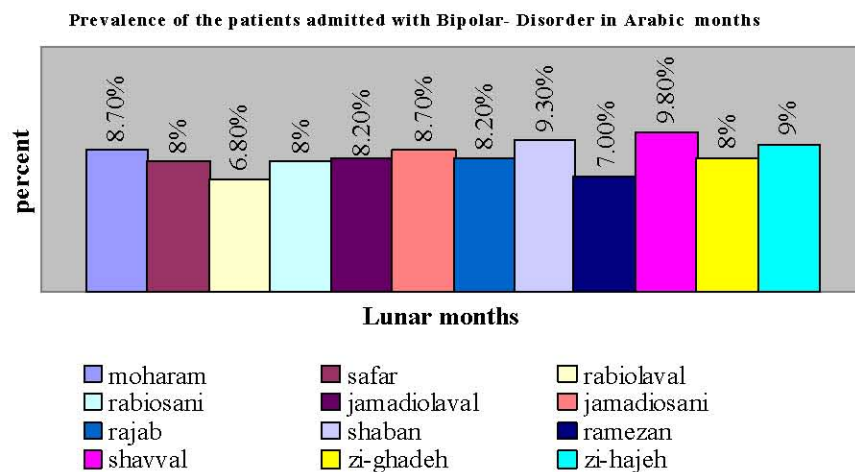


Fig. 1: Prevalence of the Patients Admitted with Bipolar Disorder in Arabic Months

Change in sleep patterns, influences recurrence of bipolar affective disorder [1, 2]. In addition, the religious ceremonies during the month of Ramadan markedly, alternate the sleep routines. Thus, we decided to evaluate the prevalence of bipolar affective disorder, among inpatients at the psychiatric wards of Zare Hospital in the month of Ramadan, in comparison with other lunar months for four successive years. We found that there was no significant difference between the numbers of patients hospitalized in the month of Ramadan and other lunar months, however, the most frequent admission rate of patients with affective disorder, was in the month of Shavaal, namely the first month following Ramadan. Furthermore, sleep loss was the chief complaint from patients during the month of Shavval. Although, no exact information pertaining to fasting or lack of patients was recorded in their charts during the month of Ramadan, drug consumption did not change in different lunar months. Our results, have demonstrated that changes in sleep routines during the month of Ramadan may induce the recurrence of bipolar affective disorder. Therefore, necessary information should be provided to the patients and their families concerning the importance of healthy sleeping, in order to prevent recurrence of the disease and decrease the dose of drugs, prior to the month of Ramadan.

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