

Seasonal variation in admission for mood disorders and schizophrenia in Mansoura University Hospital, Egypt

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Abstract:

Objectives: This is a record based study carried out in Mansoura University Hospital, Egypt during a period of three years, the aim of the study was to determine whether seasonal variations of hospital admission exist for mood disorders and schizophrenia, to examine the possible relationship between mean monthly temperature, relative humidity and admission of these disorders; and to compare with the previous studies. **Subjects and methods:** During the study period there were 130, 588, 534 and 344 new admissions of depressive episodes of bipolar disorder, manic episodes of bipolar disorder, major depression and schizophrenia, respectively. **Results:** there is a significant seasonal variation in the four diagnoses. Peak in spring for depressive episodes of bipolar disorder, peak in summer for manic episodes of bipolar disorder, winter peak in major depression and winter and spring peak in schizophrenia, there is also a significant inverse correlation between numbers of admission of major depression and mean monthly temperature for the entire sample and female patients. On the other hand, there is an inverse significant correlation number of admission of depressive episodes of bipolar disorder and mean monthly relative humidity for the entire sample. We conclude that low levels of relative humidity and temperature may be a contributing factor in the onset of depression and their consequent admission to psychiatric hospitals.

Introduction:

Seasonality is present in many aspects of human physiology, functioning and behavior (Haggag et al., 1990) for example; seasonal rhythms have been documented in weight, appetite, sleep, birth, death, and suicide (Rosen et al., 1990). Therefore, researchers' interest in the seasonality of mental illness can be understood. Many studies revealed seasonal variation in hospital admission for bipolar depressive episodes with a peak in the autumn (Silverstone et al., 1995) or winter (Moadi et al., 1994) or spring and summer (Shapira et al., 2004). Also there is evidence of peaks in manic episodes in spring and summer months (Carney et al., 1998, Takei et al., 1992, Jones et al., 1995, Kerr-Correa et al., 1998, Lee et al., 2002). There are also reports of no seasonal variation in admissions for depressive (Kerr-Correa et al., 1998, Daniels et al., 2000, Mawson & Smith, 1981) or manic episodes (Silverstone et al., 1995, Daniels et al., 2000, Hunt et al., 1992, Jain et al., 1992, Partonen & Lonnqvist, 1996). On the other hand, no seasonal pattern of admission was found in

unipolar depression (Shapira et al., 2004, Kerr Correa et al., 1998). While many studies of seasonal variation in psychiatric admission focus on the affective disorders, some authors have reported seasonal variation in schizophrenia, a summer peak in all admissions (Shiloh et al., 2005) as well as first admissions (Takei et al., 1992) has been reported, but no seasonal pattern was found in another study (Moadi et al., 1994). Studies of seasonal variation in psychiatry in the Arab world are rare, as compared to Western world. It is possible that the effect of season on hospital admission of psychiatric patients may be different in Mansoura, Egypt. The objectives of this study were to determine whether seasonal patterns of hospital admission exist for bipolar disorders, major depression and schizophrenia in our locality, to examine the possible relationship between mean monthly temperature, relative humidity and admission of these disorders; and to compare with the previous studies.