

Seasonal Variation in Schizophrenia Admissions in a Chinese Population

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Abstract

Seasonal variation has long been observed in hospital admissions for schizophrenia. Summer peaks have been consistently noted among various populations ([Hare and Walter, 1978], Takei and Murray, 1993 N. Takei and R.M. Murray, Gender difference of schizophrenia in seasonal admissions in Scotland, *Br. J. Psychiatry* 161 (1993), pp. 272–273. View Record in Scopus | Cited By in Scopus (3)[Takei and Murray, 1993], [Clarke et al., 1999] and [Shiloh et al., 2005]). Early spring, however, is traditionally regarded by the Chinese as the peak season for mental disorders. The month of March, for example, is known as ‘the month of peach blossom psychosis.’ We investigated if there was indeed a culture-specific March peak for schizophrenia by studying insurance claims for hospital admissions for schizophrenia over an 84-month period in a Chinese population in Taiwan.

Hospitalization data was obtained from Taiwan's National Health Insurance Research Database (NHIRD) for the years 1997–2003. NHIRD covers all inpatient medical benefit claims for Taiwan's National Health Insurance (NHI) program, a universal program insuring more than 21 million people, 96% of Taiwan's population.

The sample was comprised of 759,611 psychiatric admissions of patients aged 18 years or over who had a principal diagnosis of ICD-9-CM code 295 (schizophrenic disorder) between 1997 and 2003. All admissions were regarded as discrete episodes, even where patients had been admitted more than once. Because discernible gender differences had been reported in the seasonality of schizophrenia admissions (Davies et al., 2000), we also calculated monthly admission rates (case per 100,000) for schizophrenia by gender for the same study period. Seasonality was analyzed by ‘auto-regressive integrated moving average’ (ARIMA) modeling.

We found the monthly schizophrenia admission rates to range from 25.46 per 100,000 in February 1997 to 136.17 per 100,000 in March 1997 (Mean 57.43; S.D. 21.78). Fig. 1 provides an illustration of the seasonal variations in schizophrenia admissions, by gender, from which we can see that a March peak is clearly discernible. The ARIMA

test for seasonality is significant for both genders (with all p-values being less than 0.001).