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Assessing evidence for seasonality of acute episode of schizophrenia in Queensland, Australia

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Whilst there is growing evidence of seasonality or the role of climatic variables on acute hospital admissions for some noticeable mental health disorders, however, it is less documented for schizophrenia. The objective of this study was to assess the evidence for a seasonal pattern of acute episodes of schizophrenia in Queensland, Australia which contains a range of different climate patterns. Daily basis hospital admissions data for the primary diagnosis of schizophrenia were collected from Queensland Health for the period from January 1996 to December 2015. A Poisson regression model was used incorporating a flexible Cosinor function to assess monthly excess as well as a seasonal pattern in hospital admissions of schizophrenia after adjusting for trends. The evidence for seasonality was also explored in different subgroups, including socio-demographic characteristics, admission status and psychiatric comorbidities. Overall, we found a significant seasonal pattern in the monthly hospital admission rate for schizophrenia. A significant winter pattern was detected with a peak in July (10% increase in monthly mean rate ratio for the period of June-August) in temperate Southeast Queensland. However, other areas of Queensland with distinct climatic feature show different seasonal patterns (e.g., a spring pattern was detected in tropical North Queensland with a peak in October). Hospital admissions were consistently higher among males of 20-39 years, Australian origin and unemployed particularly in winter. It was interesting to highlight schizophrenia in winter among patients without psychiatric comorbidity (57.98%). The study demonstrates evidence towards the seasonality of hospital admissions for schizophrenia in Queensland. Thus, the study can be used towards designing the early interventions and treatment strategies.

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Biography

Shafkat Jahan is currently pursuing PhD in Public Health, School of Queensland University of Technology. She has completed her Masters from Queensland University of Technology, Australia. Her main research focus is environmental aspects of mental health disorders. She is currently exploring the different climatic parameters with other environmental covariates responsible of acute onset of schizophrenia.

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