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Preliminary findings from a study of first-episode psychosis in Montreal, Canada and Chennai, India: Comparison of outcomes

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ABSTRACT

Background: This article reports preliminary findings from a multi-year investigation of onset and course of previously untreated first-episode psychosis in two similarly structured treatment programs in Canada and India. Specifically, the aim of this study was to examine whether one year clinical and functional outcomes of first-episode psychosis varied between these two programs.
Method: Patients with first-episode non-affective psychosis receiving similar treatment in Chennai, India (N = 61) and in Montreal, Canada (N = 88) were evaluated for demographic variables, duration of untreated psychosis, and baseline diagnosis, and for positive, negative, and general psychopathology symptoms and overall functioning at baseline and one year.
Results: At both sites, there was a significant improvement in symptoms and functioning over the one year course of treatment. There was also a significant time-by-site interaction on negative symptoms and functioning, after controlling for age, sex, and marital status. On these domains, patients in India showed greater improvement over time than their Canadian counterparts. The time-by-site interactions were not significant for positive symptoms and general psychopathology.
Conclusion: First-episode patients in the Indian program demonstrated higher rates of improvement at one year in negative symptoms and functioning than patients receiving similar treatment in Canada. There was no difference in improvement between the sites on positive symptoms and general psychopathology. These results suggest that the sociocultural context of treatment can influence outcomes early in the course of psychotic disorders. Further, outcomes are not uniformly better or worse in one sociocultural context compared to another, but seem to vary from one outcome domain to another.

1. Introduction

That schizophrenia has a better prognosis in 'developing' than in 'developed' countries has been suggested to be "the single most important finding of cultural differences in cross-cultural research on mental health" (Lin and Kleinman, 1988). The bulk of the evidence for this comes from three cross-national studies conducted by the World Health Organization (WHO; Harrison et al., 2001; Hopper and Wanderling, 2000; Jablensky et al., 1992; Leff et al., 1992; Sartorius et al., 1996). More recently, Saha and colleagues (2005, 2006) conducted a

Abbreviations: DUP, Duration of untreated psychosis; FEP, First-episode psychosis; ICC, intraclass correlation coefficient; PEPP, Prevention and Early Intervention Program for Psychoses; SCARF, Schizophrenia Research Foundation; SCID, Structured Clinical Interview for DSM-IV; CORS, Circumstances of Onset and Relapse Schedule; PANSS, Positive and Negative Syndrome Scale; SOFAS, Social and Occupational Functioning Assessment Scale; CEGEP, Collège d'enseignement général et professionnel (College of General and Vocational Education).

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comprehensive review and found a higher prevalence of schizophrenia in 'developed' than in 'developing' nations without a corresponding difference in incidence. This finding provides support for the "better outcomes" hypothesis, although arguably it may also reflect higher rates of early mortality for people with psychosis in 'developing' countries. Several criticisms have been leveled against the finding, particularly of the WHO studies, that outcomes are better in developing countries (Cohen et al., 2008; Edgerton and Cohen, 1994; Hopper, 1991; Patel et al., 2006). Some of the criticisms pertain to varying definitions of schizophrenia across sites, the use of selective outcomes, the lack of attention to age and gender, and variations in duration of untreated psychosis (DUP) and previous treatment received by patients across sites.

Cohen et al. (2008) questioned the WHO studies by arguing that there is great variation in clinical outcomes even among 'developing' countries. While outcomes were found to be better in India for instance, this was not as much the case in Nigeria and Brazil. The Cohen et al. paper resulted in a vibrant discussion on the topic of sociocultural factors and psychosis outcomes (Bromet, 2008; Jablensky and Sartorius, 2008; Kleinman, 2008; Leff, 2008; McGrath, 2008). There was a call for more carefully designed and better interpreted research. Specific suggestions for improving the design of comparative studies were proposed, such as comparing samples with a similar DUP receiving similar treatment (Shrivastava, 2007), and studying first-episode cases, preferably incident samples, and comparing samples after an identical length of follow-up (Bromet, 2008).

In line with these suggestions, we propose that early intervention services for first-episode psychosis (FEP) can constitute a suitable setting for the study of cross-cultural variation in outcomes of psychosis. Uniformly defining FEP and studying its outcome after a specified length of follow-up can help circumvent the confounds of variation in diagnoses, DUP, and length of follow-up. Studying treatment-naive patients also minimizes the possibility that outcome differences across different sociocultural contexts are a result of differences in previous treatments received.

Trajectories of outcomes in psychotic disorders may be established soon after onset and interventions during this "critical period" can positively impact long-term illness course (Birchwood et al., 1998). In the past decade, there has been increased optimism owing to the realization that specialized intervention early in the course of psychosis can be particularly beneficial (Birchwood et al., 1998; Harvey et al., 2007; Penn et al., 2005). There is strong evidence that specialized early intervention services, compared to standard care, are associated with higher rates of improvement in symptoms, treatment adherence, lower rates of relapse, and a better quality of life and functional outcome (Garety et al., 2006; Harvey et al., 2007; Malla et al., 2002; Malla et al., 2006; Petersen et al., 2005). Based on the two findings that outcomes tend to be determined early in the course of psychosis and better in certain sociocultural contexts, one can infer that differences in outcome trajectories manifest themselves early on. This inference, however, remains to be examined systematically.

The aim of this study was therefore to examine whether one year clinical and functional outcomes of FEP patients, with little or no previous treatment experience, varied across two similar treatment programs in Montreal, Canada and Chennai, India. Based on previous research, we hypothesized that outcomes would be better in India than in Canada.

2. Methods

This article reports preliminary findings from an ongoing multi-year investigation of FEP in Montreal, Canada and Chennai, India. Using identical protocols of recruitment and treatment, the study involves the collection of extensive prospective data on symptoms, cognition, quality of life, pathways to care, and the role of families. Data collected in the first phase of this investigation (2004 to 2006) were analyzed in this report.

2.1. Treatment settings

This study included two programs for the treatment of FEP, one in Montreal and the other in Chennai. Montreal is the second-largest city in Canada, with a population of over 3.6 million. Approximately 72% of the population in Montreal are francophone and 13.5% are 'visible minorities'. The Southern Indian city of Chennai is the country's fourth largest metropolis with a population of over 7 million. The predominantly spoken language in Chennai is Tamil and its literacy rate (80.14%) is considerably higher than the national average (64.5%).

The Prevention and Early Intervention Program for Psychoses (PEPP) in Montreal is a specialized catchment area-based publicly funded program that provides assessment and treatment for FEP. Most services at PEPP are provided in out-patient or community settings.

The FEP clinic in Chennai is part of the Schizophrenia Research Foundation (SCARF), a non-governmental organization. SCARF set up a first-episode program in July 2003 in collaboration with PEPP. Most FEP patients are recruited through SCARF's out-patient clinic, where services are generally provided free of charge.

In terms of key similarities between the programs, referrals to both are taken from multiple sources, including hospitals, general practitioners, families/caregivers and young people themselves. Both programs follow a similar treatment protocol that includes case management, pharmacological management, family intervention, and close monitoring of symptoms and social functioning for at least two years. Both use a flexible protocol of low dose novel antipsychotic medications prescribed up to a maximum tolerated dose. Adjunct medications are prescribed if needed to treat comorbid depression and anxiety.

2.2. Inclusion and exclusion criteria

Inclusion criteria at both sites were (1) a DSM-IV (American Psychiatric Association, 2003) diagnosis of a schizophrenia-spectrum psychotic disorder (schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, and psychotic disorder not otherwise specified), (2) patients must not have received previous antipsychotic therapy for over a month, and (3) must provide informed consent for participation in assessments. In addition, PEPP also had an age criterion of 14 to 30 years.