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EQ-5D as a measure of programme outcome: Results from the Singapore early psychosis intervention programme

Mythily Subramaniam [a,*], Edimansyah Abdin [a], Lye Yin Poon [b], Janhavi Ajit Vaingankar [a], Helen Lee [b], Siow Ann Chong [a], Swapna Verma [b]

[a] Research Division, Institute of Mental Health, Singapore
[b] Department of Early Psychosis Intervention, Institute of Mental Health, Singapore

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ABSTRACT

The current study aimed to establish the Health-Related Quality of Life (HRQoL) among participants with First Episode Psychosis (FEP) in Singapore, to elucidate the sociodemographic and clinical correlates of HRQoL, and ascertain the change after 1-year of treatment. Two hundred and forty one patients accepted into an Early Psychosis Intervention Programme (EPIP) from April 2009 to June 2011 and who had completed baseline EuroQol-5D (EQ-5D) assessments were included in this analysis. The mean (S.D.) EQ-5D index at baseline was 0.788 (0.258). One hundred thirty five (56.0%) patients who completed the EQ-5D assessment at the 12-month follow-up had a significantly higher EQ-5D index as compared to baseline. EQ-5D index was significantly higher among those patients who met criteria for remission at the 12-month interval than those who were not in remission. Our results suggest that the EQ-5D is responsive to improvement as it corresponded well to objective ratings of remission in our patients with FEP.

1. Introduction

Psychotic disorders are severe mental health disorders that have impaired reality testing as their core feature. This debilitating illness often emerges in late adolescence or early adulthood, and remains undetected and untreated for a long period of time. Psychosis results in enormous burden to the individual and society, both, in terms of human suffering and economic cost. The Australian Low Prevalence Disorders Study Group reported that – based on the 1-month prevalence of 4.7 per thousand in the 18–64-year old age group – psychosis costs the Australian Government at least $1.45 billion per annum, while societal costs were at least $2.25 billion per annum. This corresponded to 0.23% and 0.36% of GDP from the goverment and societal perspective respectively in 1999–2000. Adopting a conservative estimate of 12-month prevalence, societal costs which were estimated to be as high as $2.54 billion, increased to $2.62 billion when 'time-loss' costs due to mortality were included (Carr et al., 2002).

Quality of Life (QoL) has come to be regarded as an important dimension of outcome in schizophrenia and other serious mental disorders. The World Health Organization (WHO) has defined QoL as individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (WHO QoL Group, 1994). Health-Related Quality of Life (HRQoL) narrows the concept to aspects of QoL that are affected positively or negatively by health and medical health care interventions. In a world of limited resources and continuous efforts to contain costs, HRQoL is often used as an outcome measure for comparison of therapies and programmes as well as for resource allocation (Awad and Voruganti, 2000).

There are some inherent difficulties in measuring HRQoL generally and specifically in those with mental illnesses. Studies have demonstrated discrepancies between QoL that is self-rated (subjective QoL) and that assessed by trained raters (objective QoL) in schizophrenia (Fitzgerald et al., 2001; Adewuya and Makanjuola, 2010). People with schizophrenia often indicate better subjective QoL than would be expected from their living circumstances or objective QoL. It has been argued that patients' psychopathology or lack of insight may limit their ability to give valid self-reports (Doyle et al., 1999; Savilla et al., 2008). However, measures of subjective and objective QoL assess different constructs, and good test–retest reliability for psychotic patients' self-reported QoL has been demonstrated (Voruganti et al., 1998). In clinically stable patients with psychotic disorders, the self-report method has been shown to be a valid and reliable way of evaluating their perceived wellness (Herrman et al., 2002; Angermeyer et al., 2001). HRQoL can be measured by instruments that are generic or disease-specific. Disease-specific questionnaires that assess HRQoL in schizophrenia include the Quality of Life Questionnaire in Schizophrenia (S-QoL) (Auquier et al., 2003)

* Corresponding author. Research Division, Institute of Mental Health, Buangkok Green Medical Park, 10 Buangkok View, Singapore 539747, Singapore.
Tel.: +6563 893 633; fax: +6563 437 962.
E-mail address: Mythily@imh.com.sg (M. Subramaniam).

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and the Lancashire Quality of Life Profile (Lqo3LP) (Oliver et al., 1997). Generic instruments, on the other hand, summarise a spectrum of core concepts of HRQoL that may apply to different diseases and populations. Thus, generic instruments can be used to compare HRQoL of patient groups across different diseases, and can provide information to support health policy decisions and cost-effectiveness analyses (Patrick and Erickson., 1993).

Studies have reported lower HRQoL among those with First Episode Psychosis (FEP) (Addington et al., 2003; Bechdolf et al., 2005). However, few have compared HRQoL of FEP with population norms or evaluated generic, self-reported HRQoL measures from a programme evaluation perspective. The aims of the current study were to (i) establish the HRQoL in terms of EuroQol-5D (EQ-5D) indices among patients with FEP in Singapore and compare it to population norms and (ii) establish sociodemographic and clinical correlates of HRQoL in this sample at baseline and ascertain the change if any after 1-year of treatment provided by the Early Psychosis Intervention Programme (EPIP) in Singapore.

2. Methods

Singapore is an island state in South East Asia; the population in 2011 was just about 5.2 million of which 3.8 million were Singapore residents (citizens and permanent residents). Of its residents, 74.1% are of Chinese descent, 13.4% are Malays, and 9.2% are of Indian descent (Singapore Department of Statistics, 2012). The EPIP is a nationwide programme, launched in 2001 at the Institute of Mental Health and Woodbridge Hospital, to address the needs of those experiencing FEP and to prevent adverse consequences (McGorry, 2002; McGorry and Killackey, 2002). One of the stated goals of the Singapore EPIP was to improve clinical outcomes and QoL of those with psychosis (Chong et al., 2004). Patients in this programme fulfil the following inclusion criteria: (i) age between 15 and 40 years, (ii) first episode psychotic disorder with no prior or minimal treatment, defined as, <12 weeks of antipsychotic medications, (iii) no current history of substance abuse, and (iv) no history of major medical or neurological illness.

2.1. Sample

This study assessed patients with FEP presenting to EPIP from April 2009 to June 2011. A total of 573 patients were screened for eligibility to be accepted in this programme between April 2009 and June 2011. Two hundred and forty one patients (42.1%) who completed baseline EQ-5D assessments were included in this analysis, 180 (31.4%) patients subsequently refused to do the EQ-5D rating and 78 (13.6%) patients did not complete all the EQ-5D fields. Three (0.5%) patients were excluded because they were assessed subsequently to be non-psychotic cases and 6 (1%) died. Eleven (1.9%) defaulted on their treatment and were lost to follow-up; 54 patients (9.4%) had been discharged from the service before the end of the follow-up period – they had either moved out of the country or wanted to continue their care with other psychiatric services. Finally, 135 patients completed EQ-5D ratings at both baseline and 12-months of follow-up (Fig. 1).

2.2. Assessments

Trained case managers collected sociodemographic data on age, gender, ethnicity, educational level, marital status, occupation and living situation from all patients using a semi-structured questionnaire. Diagnosis of participants was established using the Structured Clinical Interviews for DSM-IV (SCID-clinical version) (First et al., 1996) at the first contact (baseline). Duration of Untreated Psychosis (DUP) was operationalised as the time (in months) between onset of psychotic symptoms (delusions, hallucinations, disorganised behaviour) and the time when a definitive diagnosis and treatment were established. Patients and their primary caregivers were interviewed by the clinical team and asked to date the onset of psychotic symptoms and the DUP was estimated after combining information from the interviews and case records.

Severity of psychopathology was assessed by Positive and Negative Scale for Schizophrenia (PANSS) (Kay et al., 1987). The PANSS assesses the levels of positive, negative and general psychopathology symptoms that are associated with psychosis. It consists of 30 items scored on a 1 (absent) to 7 (extreme) scale and a higher score reflects a greater psychopathology. The Global Assessment of Functioning (GAF) was used to assess level of functioning (Goldman et al., 1992). The GAF assesses symptom severity and levels of psychological, social and occupational functioning, on a 1–100 rating scale that is divided into 10 deciles, each of which provides a description of functioning and symptom severity. A lower score on the GAF denotes a worse response. These ratings at baseline, 6, and 12 months were conducted by experienced clinical psychiatrists who were trained in the use of these instruments. All raters participated in periodic inter-rater reliability sessions to avoid rater drift. Sociodemographic data was collected using a semi-structured questionnaire by trained case managers.

We used the criteria for symptomatic remission as proposed by the Schizophrenia Working Group (Andreasen et al., 2005), that is, achieving and maintaining a PANSS rating of three or less for a duration of at least 6 months on the following items: delusions (P1), unusual thought contents (G9), hallucinatory behaviour (P3), conceptual disorganisation (P2), mannerisms (G5), blunted affect (N1), social withdrawal (N4) and lack of spontaneity (N6) (7). Functional remission was defined *a priori* as having a GAF disability score of ≥ 61 at 1 year with engagement in age-appropriate vocation when assessed 12 months after the baseline assessment (Verma et al., 2012). Patients who fulfilled the criteria for both symptomatic and functional remission were classified as being in remission for the purpose of this study.

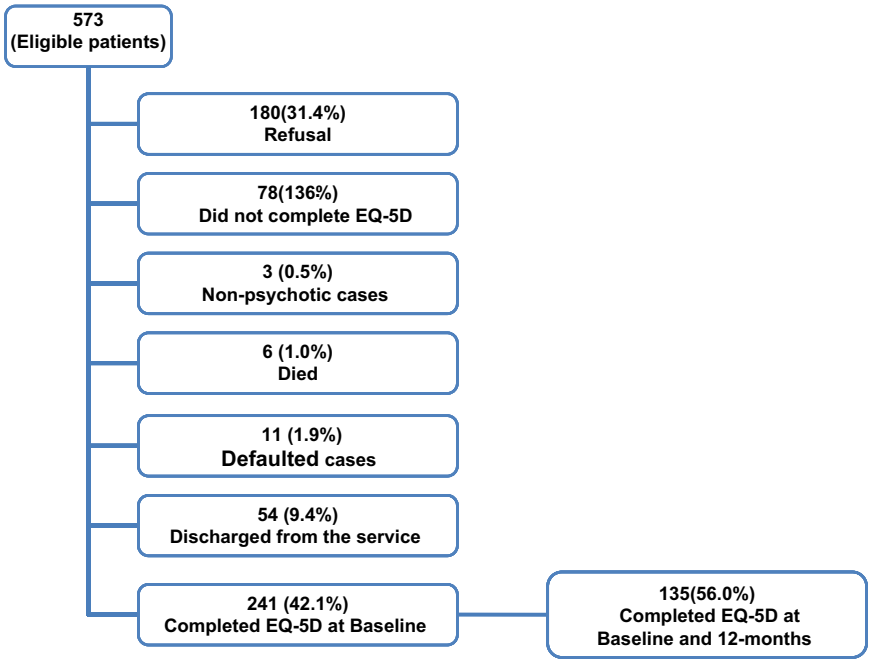

Fig. 1. Flow chart of patients.