



ECONOMIC COST OF SCHIZOPHRENIA IN A TERTIARY CARE TEACHING HOSPITAL IN INDIA

Psychiatry

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ABSTRACT

Schizophrenia is a severe mental disorder causing significant disability and burden on patients and caregivers. Costs of care include direct, indirect and intangible costs. This study primarily aimed to assess direct and indirect costs of schizophrenia in a sample of 50 patients. Mean per capita family income per month was INR 3670. Only 8 % had some kind of health insurance product. Mean travel expenses per month was INR 469. Mean expense on medication was INR 187 per month. 6% had to take loans for treatment expenses. Mean income loss due to consultancy was 144 INR per visit per month. Total cost was 810 INR per month. This study concludes the need of strengthening community mental health services, raising awareness about health insurance, enhancement of occupational rehabilitation and further cost analysis research.

KEYWORDS

Schizophrenia, direct cost, indirect cost, Mental health

INTRODUCTION

Schizophrenia is a chronic mental disorder that is associated with significant and long-lasting health, social and economic burden on patients, their families, other caregivers, and the wider society. On an average 24 million persons in world suffer from schizophrenia. Schizophrenia is a major mental disorder that usually begins in late adolescence or during early adulthood. These cause continued disability and poor quality of life. These symptoms can also place considerable burden on families.

Costs of care generally include direct costs, i.e. the expenditure on treatment, indirect costs consisting of the monetary value of lost productivity of patients/caregivers, and intangible costs in terms of stress, stigma, etc. borne by those affected.

There is a large body of literature on treatment costs of schizophrenia in developed countries, which underlines the heavy societal burden the condition poses in monetary terms. Estimates suggest that the expenditure on schizophrenia varies from 1.6 to 2.5% of annual healthcare budgets of developed countries².

In contrast to the situation in developed nations, comprehensive cost of treatment studies from developing countries is scarce. Economic evaluation is concerned with the best use of limited resources and occurs in a decision-specific context of identifying the most efficient way of meeting a stated objective.

Its main function is to allow policy makers, managers and clinicians to make choices for achieving objectives by assessing the costs and benefits of each chosen method.

AIM & OBJECTIVES

1. To assess the direct and indirect economic costs of schizophrenia.
2. To highlight the various components of the direct & indirect costs of schizophrenia.
3. To describe socio-demographical & clinical profile of the sample.

METHODS

The study site was Department of psychiatry MGM Medical College & Mental Hospital Indore. The Sample consisted of 50 patients and caregivers, recruited by consecutive convenient sampling. It was a cross-sectional descriptive study conducted for duration of 3 months. Inclusion criteria was a diagnosis of schizophrenia as per ICD-10 criteria³. Age group of 18 to 65 years, either sex. Patients accompanied with reliable relatives and giving written, informed consent for the study were recruited.

Exclusion criteria was patients with other co-existing psychiatric

diagnosis, patients with substance dependences except tobacco, patients with MR / organic brain syndromes and patients with comorbid chronic medical conditions.

Patient fulfilling inclusion criteria were interviewed with their relatives with help of semi-structured proforma and questionnaire consisted points of assessment of direct and indirect cost prepared after detailed reviewing of existent literature.

Type and dosing of medication was noted from patient's prescription and their cost was estimated as per cost of generic drugs list available from online from janaushadhi.gov.in Brief Psychiatric Rating Scale (BPRS) was applied for assessment of severity of illness and Global Assessment of Functioning (GAF) Scale was applied for assessment of functioning^{4,5}. Descriptive statistical analysis was performed with help of SPSS.

RESULTS

Table 1 and Table 2 describes Socio-demographic and clinical characteristics of the sample respectively. Mean family income per month of our sample was INR (Indian National Rupees) 15514 and mean per capita family income was INR 3670. Only 8 % had some kind of health insurance product. 50 percent were some kind of Govt. beneficiaries (BPL/DDY/Labor card). 11.5% were on monotherapy of antipsychotics. Rest majority was on two or three medication mostly in form of anticholinergic or sedatives.

Mean travel expenses per month was INR 469. Consultation cost was per visit fixed INR 10 as prescription charge (govt. institute). Mean distance travelled per visit (to and fro) was 186 kms (Range 4 to 648). Mean expense on medication was INR 187 per month. 6% had to take loans for treatment expenses.

Average Time for consultation was 6.8 hours per visit. Mean time spent in caregiving per week was 14.4 hours. Mean income loss due to consultancy was 144 INR per visit per month

Total cost = Direct + indirect costs = 810 INR per month. That comes out to be 5.4 % of mean family income per month and 22 % of mean per capita family income per month in index study.

Table 1- Socio-Demographic Characteristics of the sample

VARIABLES	
Age- (Mean in years)	34.4
Gender	
Male	34.5%
Female	61.5%

Education	
Illiterate	11.5%
Middle class	42.3%
Graduate	19.2%
Others	27%
Marital status	
Single	38.5%
Married	42.5%
Occupation	
Housewife	31%
Student	3.8%
Unemployed	38.5%
Unskilled/ semiskilled/ skilled	19.20%
Religion	
Hindu	88.5%
Muslim	11.5%
Locality	
Urban	72.3%
Rural	27.7%

Table 2- Clinical Characteristics of the sample

VARIABLES	
Mean age of onset	24.6 years +/- 7.3 years
Mean duration of illness	9.60 years (Range 1 - 23years)
Mean BPRS Score	25.3 (Range 18-36)
Mean GAF Score	49.9 (Range 22-80)

DISCUSSION

Index study aimed to assess economic cost of schizophrenia in a tertiary care govt. hospital. It came out to be INR 810 per month or INR 9720 annually which is in range of 2 similar Indian studies which shown the cost as INR 8400 and INR 13687 annually^{2,6}.

Direct cost consisted 83% of the total cost. Indirect cost consisted 17% of the total cost which is similar to the study of Sarma et al from India⁶. In a similar recent study from another developing country Nigeria the total annual cost was 818 USD annually approximately 7 fold higher than our study⁷. Possible reason might be very high cost of imported medication used and inclusion of inpatient cost in their study.

Average distance travelled per visit was 186 Kms and majority of direct cost was attributed to travel expenses. Thus strengthening the mental health services in the community specially in periphery can reduce the travel expenses and time.

Only 8% of the sample had some kind of health insurance thus there is a need to raise awareness about health insurance and inclusion of mental illness in its purview is necessary.

38.5 % of the subjects were unemployed, thus further increasing the economic burden. Enhancement of occupational rehabilitation services is required.

Our study has certain limitations to be noted like our sample consisted from only one center, small sample size and outpatients only thus results cannot be generalized. There may be recall bias among responders. Certain components of indirect costs such as mortality costs, cost of benefits, costs of caregiving, etc. could not be assessed. We calculated medication cost at generic rates however thus actual cost of these drugs are estimated to be higher in practice due to use of branded drugs by clinicians. There was minimal consultation charge being a govt. hospital elsewhere the consultation charges are expected to be much higher.

India's population is estimated to be 136 crores taking 1% prevalence of schizophrenia there may be 1.36 crores pts with schizophrenia in India. Taking our annual estimate of cost of schizophrenia per person (9720 INR) the estimated total cost for schizophrenia country wide annually comes out to be INR 13200 crores. currently much less financial resources are dedicated to mental health than actually needed and pts and their caregivers bear most of the expenses.

so, it is recommended that policy makers address this gap between

problem statement and resources available. There is a need of further research in this area particularly studies testing associations and correlations of various cost variables.

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