Study of factors associated with course and outcome of schizophrenia (SOFACOS)

Background
IPSS study had shown that the outcome of schizophrenia is relatively better in developing countries than developed countries. Thus ICMR conducted a multicentric study to study the factors associated with course and outcome of schizophrenia.

Aim
1. To identify the sociocultural and clinical variables which are associated with and might be etiologically related to course and outcome of schizophrenia
2. To study whether the course and outcome of schizophrenia is better in a developing country as suggested by IPSS
3. Do different centers in India with different sociocultural backgrounds differ in the course and outcome of schizophrenia

Methods
- Conducted between 1981 and 1982
- 3 centers – Vellore, Madras, Lucknow
- Subjects – All patients matching the (OP and IP) in one year duration from a defined catchment area. Inclusion criteria were modified Feigner’s criteria. Duration was decreased to 3 months and the criterion regarding marriage was removed. Total number of subjects - 386, Lucknow-207, Madras – 96, Vellore-83.
- Assessments were done with PSE, PPHS, DPS
- Follow up every three to six months

Course and outcome was assessed using 4 criteria
1. Percentage of period spent in psychotic state
2. pattern of course
3. Occupational outcome
4. Social outcome

Results
Psychopathology
1. Lack of insight – 65
2. Blunted affect – 62
3. Social impairment- 60
4. Auditory hallucination- 56
5. Delusion of persecution - 51
6. Delusion of reference- 49
7. Delusion of control – 24%
8. Thought broadcast – 13%
9. Thought insertion – 13%
10. Primary delusions – 9%

Follow up –
- 2 years – 83% follow up rate
- Remission – 64%, episodic – 24%, continuous – 11%
- Outcome – Good – 66%, best – 33%, Suicide – 2.3%
- 5 years – 75% follow up rate
  - Good – 67%, best – 23%, Suicide – 3.1%

**Factors associated Good outcome**
1. Good compliance
2. Short duration of illness
3. Rural background
4. Low education
5. More tolerance on part of relatives
6. Involvement in religious activities
7. Absence of economic difficulties
8. Absence of delusion of persecution
9. Absence of self neglect
10. Absence of dangerous behavior
11. Young age at onset – odd finding
- Life events/ objective stress score – were not significantly related
- Attitude of relatives – related to poor outcome

**Conclusions**
1. The outcome of schizophrenia is good in India compared to developed countries (comparable to results of IPSS study)
2. Factors were identified which are associated with good outcome
3. There was no difference between the centers within India though there were socio cultural differences between the centers.

**Limitations**
1. Not an epidemiological sample
2. Acute psychosis cases might have contributed to good outcome
A collaborative study on the phenomenology and natural history of acute psychosis

Centers- Patiala (Dr. Gurmeet Singh), Bikaner, Goa, Vellore (Dr. Kuruvilla)

Aims
1. Study phenomenology, natural history, socio-demographic correlates, family history, response to treatment, long term outcome and prognostic indicators of cases of acute psychosis
2. To study whether acute psychosis is unitary, hitherto unrecognized disease entity or made up of a heterogeneous group of disorder and if so whether it is possible to clearly define a separate entity distinct from schizophrenia or affective illness

Inclusion criteria
1. Age 15-60
2. Contact within 4 week of onset
3. Presence of any 2 of delusions, hallucinations, confusion and disorientation, grossly inappropriate and socially undesirable behavior, marked excitement/withdrawal/ elation/ depression

Exclusion criteria
1. Gross organic brain disorder
2. Epilepsy
3. Mental retardation
4. Previous episode of psychotic illness
5. Antipsychotic >1 week
6. Residence beyond a defined catchment area

Materials and methods
1. Instruments used- SCAAPS (schedule for clinical assessment of acute psychotic states), PSE, Descriptive diagnostic categories
2. Patients admitted for 4-6 weeks. Assessments were done at weekly intervals in first 6 weeks and later at 3 months, 6 months and 1 year
3. Patients were treated either by neuroleptics / antidepressants

Groups
1. Fully treated – regular treatment
2. Partially treated- at least 2 days of treatment
3. Untreated- refused treatment or less than 2 days of treatment

Observations and conclusions
1. Overall prevalence was 8.7%
2. 35% were 15-20 years, 76% <30 years
3. Male=female
4. Onset- <48 hrs in 54%,>48 hrs but <1 week in 33% and between 1 and 2 weeks in 1%
5. Premorbid personality- 76%-normal, schizoid-4, hysterical-26
6. Family history- positive in 28%
7. Minority group-7%
8. Stress- Definitely reactive in 20%
9. Most common presenting feature- paranoid and excited
10. Using CATEGO -
   a. 20%- definite schizophrenia
b. 19% - MDP  
c. 6% - Depressive psychosis  
d. 35% - couldn’t be classified  
e. 20% - more than one class

11. Recovery- Full recovery- 75% (exclusion of schiz and MDP- 85%) Full remission with one relapse- 10%

<table>
<thead>
<tr>
<th></th>
<th>Total (%)</th>
<th>Core group(exclude schiz and MDP) %</th>
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<tbody>
<tr>
<td>Full recovery</td>
<td>75</td>
<td>85</td>
</tr>
<tr>
<td>Full remission with one relapse</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Clinical remission with residual symptoms or index episode</td>
<td>14</td>
<td>6</td>
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12. Good outcome variables- Onset- Abrupt onset- 89% full remission
13. Poor outcome –
   a. Presence of tension and anxiety  
   b. Decreased ability to enjoy  
   c. Auditory hallucination  
   d. Agitation or excitement, perplexity  
   e. Irrelevant, vague or idiosyncratic behavior
14. One year outcome of Acute onset psychotic illness  
   a. 25% at both initial contact and 1 year- schizophrenia  
   b. 25% - MDP  
   c. 50% - acute psychosis
15. Relation to treatment!!!!!  
   a. Treatment group- 79%  
   b. Non treatment group- 82%!!!!!
International pilot study of schizophrenia (Psychological medicine 1992, 22, 131-145)

Trans-cultural psychiatric investigation initiated in 1968

**Aim** – total 6 questions were addressed

1. Does schizophrenia exist in different parts of the world
2. Are there groups of schizophrenic patients with similar characteristics in different countries
3. Does the course of schizophrenia differ in different cultures
4. To compare schizophrenia patients with other psychotic disorders in different countries

**Methods**

**Subjects**

Since the diagnostic practices vary inclusion categories were symptoms than diagnostic labels. They were divided into two groups,

1. Those whose presence automatically qualified the patient into inclusion – delusions, hallucinations, gross psychomotor disorder, definitely inappropriate and unusual behavior.
2. Those considered as a basis for inclusion only if present in severe degree – social withdrawal, disorders of form of thinking, overwhelming fear, disorders of affect, self neglect and depersonalization.

Those between 15–45 years of age were included. Organicity, alcohol or substance dependence were exclusion factors. Chronic patients were also excluded.

**Study design**

**Centers** - 9 countries – Columbia (Cali), China (Taipei), Czekoslovakia (Prague), Denmark (Aarhus), India (Agra), Nigeria (Ibadan), USSR (Moscow), UK (London), USA (Washington). Cali, Ibadan and Agra are considered as the centers in developing countries.

In Agra study was conducted by Dr. K. C. Dube

- Samples were recruited from successive admissions or referrals to psychiatric facilities in different centers. 1202 patients were recruited.
- Instruments used- The patients were assessed using PSE, FUPH (Follow up psychiatric history Schedule), FUSD (Follow up social description scale) and the FUDA (Follow up diagnostic assessment schedule).

**Follow up** – Taipei centre follow up was not done. In the remaining 76% were followed up. The sample which was followed up did not differ from the sample originally followed thus ruling out the potential bias that could have been present because of the non followed patients.

**Results at 5 year follow up**

Factors predicting either social or clinical outcome-

1. Developing/developed country
2. sex – females better course
3. Marital status – married better than single
4. Acuteness of onset - better
5. Duration of symptoms before contact- first contact with services
6. CATEGO class S+ - poor
7. Initial social isolation and sexual adjustment
8. Poor premorbid personality

Overall 24% had severe social impairment and 76% had no or moderate impairment

**Developing – developed dichotomy**

- Highest proportion of asymptomatic patients was found in both Agra and Ibadan. Highest proportions of symptomatic patients were present in Moscow and Aarhus.
- Highest proportion of patients spending <5% of time in a psychotic episode was seen in Agra, Cali, Ibadan, Washington.
- Agra (42) and Ibadan (33) had the highest percentage with best outcome and lowest with worse outcome. London also had a similar outcome. Aarhus had the worst outcome with nearly 40% of the patients being continuously psychotic.
- In Agra around 66% had a good outcome and only 10% had worse outcome.
- Lowest percentage of severe social outcome was seen in Agra, Cali and Ibadan while the largest percentage was seen in Aarhus.

**Other psychosis**

Affective psychosis had a better outcome than schizophrenia. Patients from developing countries had a significantly different social and clinical outcome compared to those from developed countries. Thus social and cultural factors are responsible for good outcome across diagnostic boundaries.

**Limitations**

- Not an epidemiological sample. In developing countries with scarce clinical services may be a biased sample is presented. However in DOSMED study, an epidemiological sample showed similar results.
- Samples from developing countries contain a disproportionate number of acute psychosis which resolve rapidly. However even after controlling for acuteness of onset the developing countries had a better outcome.

Other studies compared –

- Stephens review of studies
- Watts 5 year data – London epidemiologic population, but showed a better result than IPSS. However it was consisting of population from sub urban areas.
- Murphy and Raman Mauritius study
DOSMED – Determinants of Outcome of Severe Mental Disorders (ten country study)

Aims
1. Incidence rates of schizophrenia in different cultures
2. To link epidemiological estimation of incidence rates to a diagnostic and psychopathological analysis

Design
- An epidemiological study
- A catchment area was defined around the center which was chosen
- All cases approaching the center under consideration were recruited if satisfied inclusion criteria
- Helping agencies were chosen which are possible first contact to the patient

Centers
- 13 centers in 10 countries were chosen. In India the centers were Agra, Chandigarh – rural & urban.
- A screening criteria was applied for all potential cases and then were recruited in to the study. Assessments were done using PSE, PPHS, DPS, Life events schedule, KAS, WHO disability assessment schedule

Results
- 1379 subjects were recruited in to the study over a period of 2 years
- Male female ratio was 1.2
- Acute onset – 36%, Sub acute inset (1 to 4 weeks) 18% and slow/ insidious – 35%
- Paranoid schizophrenia was the most common subtype, followed by undifferentiated
- In developing countries, acute onset was greater than in developed countries

Incidence rates
- Broad diagnostic group – Ranged from 1.5 (Aarhus) to 4.2 (Chandigarh) per 1000 – The difference across areas was significant
- Restrictive group – 0.7 to 1.4 per 1000 – there was no significant difference between the centers
- Also there were differences in the male and female ratios

Follow up data
- Acute onset patients had mild or intermediate pattern of course
- Gradual onset had a severe pattern of course
- Also the developing countries like Agra and Chandigarh had better outcome than developed countries

- Compiled by Dr Naren P Rao