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Differential Characteristics of “Good Outcome Schizophrenia” in a Long-Term Ten Years Study, Mumbai, India

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Differential Characteristics of “Good outcome Schizophrenia” in a Long-Term Ten years study, Mumbai, India

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4. Department of Biostatics & Epidemiology, University of Western Ontario, London, Ontario, Canada
Declaration

- Declaration of Conflict of Interest
  - Janssen Group
  - Eli Lilly
  - Astra Zeneca
  - Nicholas Piramal-Rosch
  - Sun Pharma- India
  - Prempharma , Canada

- in Capacity of
  - Consultant
  - Advisor
  - Drug trial coordinator
  - Research Investigator
  - Reviewer
  - Speaker
  - Educational Groups
18 million
Introduction:

- The illness of schizophrenia has always been a matter of concern for its nature and extent of outcome particularly for its regional and cultural differences.
- The concept of outcome has been evolving and this study examines the scenario of good outcome in developing countries.
- Methods Re-examination of recovered patients in ten years long term, naturalistic, prospective study using Meltzer et al’s 13 outcome criteria & on a new outcome scale
Defining outcome

Response
- Often a response is the result of a stimulus.

Remission
- the state of absence of disease activity in patients with a chronic illness, with the possibility of return of disease activity.

Recovery
- Recovery may be seen within the model as a personal journey requiring hope, a secure base, supportive relationships, empowerment, social inclusion, coping skills, and finding meaning.
Methods

- In a cross sectional, Naturalistic, cohort study, patients showing good outcome at the end of ten years treatment, were recruited as per inclusion criteria.
- These patients were re-assessed for the status and quality of recovery using Meltzer et al’s 13 outcome criteria.
- Results were analyzed.
Methods

1993 Phase I
N=200

Follow up period for 10 years
Phase II
Drop outs : 93

2003 Phase III
N= 107

Present study
Good outcome : 67

Study parameters:
- Demography
- Clinical parameters
- Meltzer’s 13 Outcome criteria
- New outcome measure.
- PANSS
- CGIS
# Global outcome criteria in schizophrenia

Various parameters quantified based on clinical and social outcomes.

<table>
<thead>
<tr>
<th>Areas</th>
<th>Scores</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Withdrawn behavior</td>
<td>Expressed desire of interaction</td>
<td>Definitive evidence of improved functioning</td>
<td>Improvement in functioning and relationship</td>
<td>Functioning with satisfaction</td>
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<tr>
<td>Social Functioning</td>
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<tr>
<td>Productivity</td>
<td></td>
<td>Unproductive</td>
<td>Expression of productivity</td>
<td>Occasional Productivity</td>
<td>Productive with support</td>
<td>Productive without support</td>
</tr>
<tr>
<td>Economic Independence</td>
<td></td>
<td>Complete dependence</td>
<td>Desire to earn</td>
<td>Attempt with failure</td>
<td>Attempt with success</td>
<td>Satisfactorily independent</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td>Unable to resume</td>
<td>Feels confident but unable to start</td>
<td>Attempt but not sustained</td>
<td>Sustained without satisfaction</td>
<td>Sustained with satisfaction</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicidality</td>
<td></td>
<td>Attempted suicide</td>
<td>Experiencing suicidal crisis</td>
<td>Contemplating suicide</td>
<td>Occasional death wish</td>
<td>No intent</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehospitalization</td>
<td></td>
<td>Required due to relapse</td>
<td>Required due to additional stress</td>
<td>Required due to side effects</td>
<td>Required unrelated to current illness</td>
<td>Not required</td>
</tr>
<tr>
<td>Exacerbation</td>
<td>Severe exacerbation with hospitalization</td>
<td>Severe exacerbation</td>
<td>Moderate exacerbation</td>
<td>Mild behavioral exacerbation</td>
<td>No exacerbation</td>
<td></td>
</tr>
</tbody>
</table>
Methods

Screening: Patients diagnosed as schizophrenia; Completed treatment of ten years

Assessment with CGIS

Poor outcome (CGIS: mild & Moderate recovery, score > 3): ruled out

Good outcome (CGIS: good & Excellent outcome Score 1 & 2): selected

Confirmation of diagnosis as per DSM IV

Recruited: Confirmed diagnosis & as per inclusion, exclusion criteria

Study Phase

Re-assessment for outcome status

Assessment tools: 13 outcome measures 7 Global outcome measures

analysis
### Results

| Study Site | Mumbai, INDIA  
|            | PRERANA Psychiatric Services & Silver Mind Hospital |
| Nature of Study | Cross-Sectional, Open level, Cohort Study |
| Selected & assessed | 107 |
| Recruited as per Criteria (Good Outcome) | 67 |

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Mean age</td>
<td>49.3 (range 36-58 years) SD 8,</td>
</tr>
<tr>
<td>Male</td>
<td>42</td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
</tr>
<tr>
<td>Mean duration of illness</td>
<td>16.5 years</td>
</tr>
<tr>
<td>Mean Duration of Treatment</td>
<td>12.5 years</td>
</tr>
</tbody>
</table>
Quality of Life

![Bar graph showing a mean score of 76.2 for QOL]
Suicidality

1. Attempted suicide
2. Experiencing suicidal crisis
3. Contemplating suicide
4. Occasional death wish
5. No intent

Persistent suicidal ideation at 10 years

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<tbody>
<tr>
<td>%</td>
<td>&lt;3</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Symptom Exacerbation

<table>
<thead>
<tr>
<th>Exacerbation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Severe exacerbation with hospitalization</td>
<td>&lt;3</td>
</tr>
<tr>
<td>2. Severe exacerbation</td>
<td>57</td>
</tr>
<tr>
<td>3. Moderate exacerbation</td>
<td></td>
</tr>
<tr>
<td>4. Mild behavioral exacerbation</td>
<td></td>
</tr>
<tr>
<td>5. No exacerbation</td>
<td></td>
</tr>
</tbody>
</table>

Symptom exacerbation present at 10 years
Hospitalization

1. Required due to relapse
2. Required due to additional stress
3. Required due to side effects
4. Required unrelated to current illness
5. Not required

<table>
<thead>
<tr>
<th>Rehospitalization</th>
<th>1. Required due to relapse</th>
<th>2. Required due to additional stress</th>
<th>3. Required due to side effects</th>
<th>4. Required unrelated to current illness</th>
<th>5. Not required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehospitalization at least once</td>
<td>63%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No hospitalization after first one</td>
<td>37%</td>
<td></td>
<td></td>
<td></td>
<td>&gt;3%</td>
</tr>
</tbody>
</table>
Social Outcome: Economic Independence

|-----------------------|-----------------------|------------------|-------------------------|------------------------|-----------------------------|

at 10 years >3

- Economically independent: 44
- Economically dependent: 66

at 10 years >3
Social Outcome: Education/ work

At 10 Years >3 score

At 10 Years >3 score

able to pursue work/education unable to pursue

<table>
<thead>
<tr>
<th>Education</th>
<th>1. Unable to resume</th>
<th>2. Feels confident but unable to start</th>
<th>3. Attempt but not sustained</th>
<th>4. Sustained without satisfaction</th>
<th>5. Sustained with satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>31</td>
<td>69</td>
</tr>
</tbody>
</table>
Social outcome: Functioning

at 10 Years

at 10 Years

0 20 40 60 80

Improved Social functioning

Poor social functioning

Social Functioning
1. Withdrawn behavior
2. Expressed desire of interaction
3. Definitive evidence of improved functioning
4. Improvement in functioning and relationship
5. Functioning with satisfaction
Social outcome: Productivity

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</tbody>
</table>

at 10 years

Loss of Productivity: 50
Sustained productivity: 50
Re-assessed outcome at 10 years
Need to re-define outcome measures to capture real-life situation

- A significant number of patients (about 40%) who are conventionally considered to be of good outcome continue to live with varying degree of symptoms.
- It appears that available outcome measure do not capture real-life situation and these measurement tools are required to be more specific, comprehensive and sophisticated.
- Present study also highlights lower elapse rate (60%), economic independence in 70% and improved social functioning in 64% of patients at the end of ten years.
Discussion

- Poorly defined cohorts and weak study designs have hampered cross-cultural comparisons of course and outcome in schizophrenia (Harrison G., 2001.)
- Best outcome from different countries are varying between 34% to 62%, By and large at ten Years the outcome is not more than 40-50%
- Outcome in schizophrenia is a multidimensional measure, therefore it needs to be performed on different parameters.
- Attempts are required to successfully integrate these measure into composite scale for easy understanding to define how different parameters can be converged to point out same measure of outcome, is a challenge at present
Several international studies of long term outcome show a variable rate of remission between 33 to 50% from developed countries. (Harrow, et al 1997; Martin Knap, 1997; Westermayer & Harrow, 1984)

DOSMED Study from India showed a remission rate of 62% at 5 years

A global recovery rate of 62% as per CGIS at the end of ten year period of Continued treatment is comparable to other long term studies from Indian Cities (Harrison G, et al; Br J Psychiatry. 2001 Jun;178:506-17)
Conclusion

Schizophrenia is a complex neurobehavioral disorder with limited outcome.

Half of the patients improve with no concomitant difficulty while another half improves varieties of disability.

Outcome measures in schizophrenia need to be re-structured to capture real-life situation.
Limitations

Major limitation of the study is small sample size for better correlations & high drop out rate which indicate difficult situation in the city regarding time, transport and lack of support, besides the expense involved.

Merits

The study highlights as to why people suffering from schizophrenia remain marginalized even after recovery. Treatment methods need to address status of recovery.

It also highlights that prevailing outcome measures need to be re-formulated and made more sophisticated.