B-COS Gender Matters: Presenting the Profile of Females with Bipolar Disorder from an Australian Observational Study

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Background
Bipolar Disorder in Australia

- Reported lifetime prevalence ranges from 0.45 to 5.5% (Morgan et al., 2005, Goldney et al., 2005)
- Constitutes over 10% of the clinical population with psychotic illness (Morgan et al., 2005)
- Service utilisation costs of equal or greater value to people with schizophrenia, despite less chronic impairment; as well as high burden of social and occupational disablement (Morgan et al., 2005)
- Around 50% of people with bipolar disorder unemployed (Morgan et al., 2005)

Gender Differences

- Understanding gender differences in mental illness is important
- Females previously under represented
- Increased knowledge can guide clinical decisions

- Gender affects the course of illness, and the expression of Bipolar I Disorder and Schizoaffective Disorder in many ways, e.g
  - Age at onset
  - Severity and frequency of symptoms
  - Self-reported quality of life
Women typically receive a diagnosis of Bipolar Disorder on average 3.2 years later than men (Viguera, et al 2000).

By the age of 25, more men (71%) than women (52%) have a diagnosis of bipolar disorder. After age 30, women more likely to be diagnosed with the disorder than men (Viguera et al, 2000).

Women are more likely to experience a significant delay in seeking treatment and are more likely to experience a depressive first episode than men (Arnold 2003, Baldassano 2006).

Mood disturbance as a result of seasonal changes is also more common in women; with more depressive episodes seen in Autumn and Winter (Faedda et al 1993, Suhail K et al, 1998).

Women more frequently experience rapid cycling and more severe depressive episodes. Up to 88% of people who experience rapid cycling are women (Robb et al 1998).

Women are more likely than men to be hospitalised for mania, however this is inconsistently reported (Viguera et al 2001, Hendrick et al 2000).

Women experience more mixed episodes, however this too is inconsistently reported (Arnold et al 2000, McElroy et al 1992).
Women generally rate their quality of life, overall health and well-being as worse than men. This persists despite no differences between objective ratings. (Robb et al 1998)

Women report greater pain and worse physical health. (Robb et al 1998)

May be associated with higher frequency and severity of depressive episodes experienced by women. (Arnold 2003)

Aims

- To replicate previous findings in a current, Australian setting
- To present a picture of the average female with bipolar disorder living in a current, Australian setting
- To understand the impact of gender on the presentation and outcomes of bipolar disorder
- To highlight the need for continued awareness of these issues that remain a problem over time and in different settings regardless of constant advances in treatments
The Bipolar Comprehensive Outcome Study (BCOS) is a two year, prospective, observational study of 239 participants with a diagnosis of Bipolar I Disorder or Schizoaffective Disorder.

**Inclusion Criteria:**
- Males or females ≥ 18 years
- Diagnosis of bipolar or schizoaffective disorder [DSM-IV TR criteria, confirmed by MINI (Mini-International Neuropsychiatric Interview)]
- Prescribed an approved mood stabiliser (either lithium, sodium valproate, carbamazepine or olanzapine)
- Able to give written informed consent
Participant Recruitment

- Recruited through various means including
  - acute psychiatric hospital wards,
  - community mental health clinics,
  - and through local newspapers and community group newsletters.

- From two sites in Victoria
  - Alfred Psychiatry Research Centre, The Alfred
  - Barwon Health

- Recruitment was completed in November 2005 and last participant seen in November 2007

- All participants received treatment as usual and participated voluntarily

Measures

- Participants are interviewed at 3 monthly intervals and evaluated each time using the following measures:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Measure</th>
<th>Rated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-item Hamilton Depression Scale</td>
<td>Depressive symptoms in past week</td>
<td>Interviewer</td>
</tr>
<tr>
<td>Young Mania Rating Scale</td>
<td>Mania symptoms in past week</td>
<td>Interviewer</td>
</tr>
<tr>
<td>Clinical Global Impressions Scale - CGI BP</td>
<td>Current symptomatology</td>
<td>Interviewer</td>
</tr>
<tr>
<td>The current Major Depression/Manic Episode Checklist</td>
<td>Depressive and Manic symptoms in the past 3 months</td>
<td>Interviewer</td>
</tr>
<tr>
<td>The Diagnostic Interview for Psychosis (DIP)</td>
<td>Level of Functional Impairment</td>
<td>Interviewer</td>
</tr>
<tr>
<td>EuroQol (EQ-5D)</td>
<td>Health-related Quality of Life</td>
<td>Self-report</td>
</tr>
<tr>
<td>SLICE/LIFE</td>
<td>Quality of Life</td>
<td>Self-report</td>
</tr>
<tr>
<td>36-item Short Form Health Survey</td>
<td>Functional health, well-being, physical and mental health</td>
<td>Self-report</td>
</tr>
</tbody>
</table>
Data cleaning and analysis continues; full dataset at all timepoints not yet available

The data presented here is baseline data

Due to differences in disorders and genders, this presentation will focus primarily on females with bipolar disorder (n=107)

Some gender comparisons will be made (total n=175)
### Participants

<table>
<thead>
<tr>
<th></th>
<th>Bipolar I Disorder</th>
<th>Schizoaffective Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>Females = 107</td>
<td>Females = 32</td>
</tr>
<tr>
<td></td>
<td>Males = 68</td>
<td>Males = 32</td>
</tr>
<tr>
<td><strong>% of total sample</strong></td>
<td>44.8% female</td>
<td>13.4% female</td>
</tr>
<tr>
<td><strong>Nationality</strong></td>
<td>Female = 97.2%</td>
<td>Female = 96.9%</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>Caucasian</td>
</tr>
<tr>
<td></td>
<td>Males = 95.6%</td>
<td>Males = 100%</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Females = 42.7</td>
<td>Females = 40.4</td>
</tr>
<tr>
<td></td>
<td>Males = 42.5</td>
<td>Males = 38.8</td>
</tr>
<tr>
<td><strong>Mean age at onset</strong></td>
<td>Females = 22.7 (n=93)</td>
<td>Females = 22.2 (n=23)</td>
</tr>
<tr>
<td></td>
<td>Males = 24.9</td>
<td>Males = 20.5 (n=26)</td>
</tr>
</tbody>
</table>

#### Initial Affective Episode - Bipolar Disorder

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Mania</th>
</tr>
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<tbody>
<tr>
<td><strong>Females</strong></td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td>50%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Initial Affective Episode (p = .005)
# Income and Employment - Females with Bipolar Disorder (n=107)

- Full-time job (11.2%)
- Part-time employment (37.4%)
- Housework (21.5%)
- No job at present (19.6%)
- Retired (5.6%)
- Studying (4.7%)

**General population - average weekly earnings (all employees): $781.70 (ABS, Feb 2005 data)**

*Australian Bureau of Statistics, (June 2005)*

- $1000-$1499/Week (2.8%)
- $200-$499/Week (66.4%)
- $500-$999/Week (25.2%)
- Negative/ Nil Income (3.7%)

**Relationship quality with partner (p=0.583)**

<table>
<thead>
<tr>
<th>Quality of Life – Relationship with partner and children</th>
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<tbody>
<tr>
<td>Females</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
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**Relationship quality with children (p=0.495)**

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<td>Females</td>
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<tr>
<td>Good</td>
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</table>
Mania severity – YMRS
(p<.274)

Depression severity – HAMD
(p<.031)

Illness severity at baseline

Mania – CGI scores
(p<.254)

Depression – CGI scores
(p<.043)

Illness Severity over previous 3 months

Bipolar – CGI scores
(p<.093)
Percentage self-reported compliance ($p=.003$)

Treatment Adherence and Hospitalisation

- 27 females were hospitalised in the 3 months prior to baseline assessment. Two persons had been admitted twice. The average length of stay for females was 22.4 ± 14.6 days.
- 29 males were hospitalised, and one person admitted three times. The average length of stay was 21.0 ± 12.8 days.

Physical and Mental Health

- Physical Component Score ($p=.025$)
- Mental Component Score ($p=.07$)
Enjoyment of recreational activities ($p=.422$)

Satisfaction with life ($p=.648$)

Level of work impairment ($p=.573$)

Level of household impairment ($p=.850$)
### Substance use - Females (n=107)

<table>
<thead>
<tr>
<th>Substance</th>
<th>General population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>22% adults were daily smokers (Australian Bureau of Statistics, 2001 Census).</td>
<td>54.7% smoke daily, 27.1% have never smoked</td>
</tr>
<tr>
<td>Cannabis</td>
<td></td>
<td>84.1% don’t use, 7.5% use monthly</td>
</tr>
<tr>
<td>Ecstasy</td>
<td></td>
<td>94.4% don’t use, 2.8% use monthly</td>
</tr>
<tr>
<td>Speed</td>
<td></td>
<td>93.5% don’t use, 2.8% use monthly</td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td>20% drink daily</td>
</tr>
</tbody>
</table>

### Conclusions

- Results of this study were in line with previous research.
- Women in this sample reported low levels of enjoyment, poor quality of life, physical health and more depressive symptomatology than manic.
- Women were younger than men when they first experienced a major affective episode, and this was significantly more likely to be a depressive episode. They also reported significantly more symptoms of depression than the males in the sample.
- Compared to the general population, women with bipolar disorder in this sample had much lower rates of employment, earned significantly less and had higher rates of substance usage.
- This too is in line with the increasing awareness of the level of disability experienced by women with bipolar disorder.
Conclusions

- Findings such as these will hopefully lead to a better understanding of the experience of bipolar disorder for women, leading to improvements in clinical treatment.

- For clinicians treating women with bipolar disorder, improvements in treatment may result from a more specific focus on such areas as:
  - effective recognition and management of symptoms (early warning signs, etc)
  - improvements in the areas of quality of life and functioning
  - monitoring and improvements in physical health and wellbeing

- This will hopefully assist in the better treatment and rehabilitation of women with bipolar disorder leading to a greater quality of life with less symptomatology.

BCOS Study Team

- The Alfred Psychiatry Research Centre (APRC)
  - Jayashri Kulkarni, Paul Fitzgerald, Anthony de Castella, Sacha Filia, Kate Filia, Frances Biffin
- Barwon Health, Geelong
  - Michael Berk, Seetal Dodd, Lesley Berk
- Eli Lilly Australia
  - Bill Montgomery, Katarina Kelin
- University of Western Sydney & Mental Health Association, NSW
  - Meg Smith
- Intercontinental Information Sciences (ICIS)
  - Alan Brnabic, Amanda Lowry
References