

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 and Bipolar Disorder - *Age at onset*

- 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)



Women and Bipolar Disorder - *Symptoms and course of illness*

- 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 and Bipolar Disorder - *Quality of Life and Functioning*

- 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



Method



BCOS Study Design

- 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:

Scale	Measure	Rated By
21 item Hamilton Depression Scale	Depressive symptoms in past week	Interviewer
Young Mania Rating Scale	Mania symptoms in past week	Interviewer
Clinical Global Impressions Scale - CGI BP	Current symptomatology	Interviewer
The current Major Depression/Manic Episode Checklist	Depressive and Manic symptoms in the past 3 months	Interviewer
The Diagnostic Interview for Psychosis (DIP)	Level of Functional Impairment	Interviewer
EuroQol (EQ-5D)	Health-related Quality of Life	Self-report
SLICE/LIFE	Quality of Life	Self-report
36-item Short Form Health Survey	Functional health, well-being, physical and mental health	Self-report



Participant Data

- 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 $n=175$)

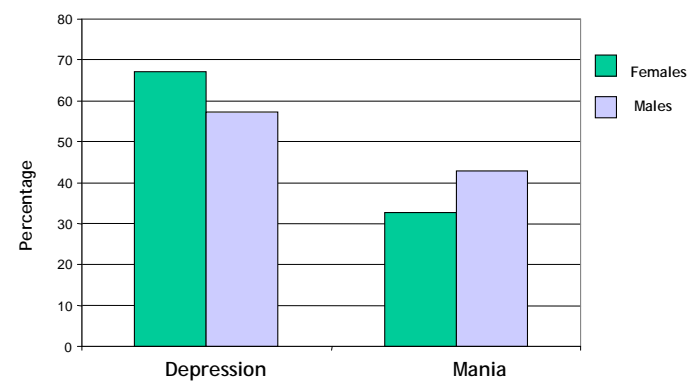


Results

Participants

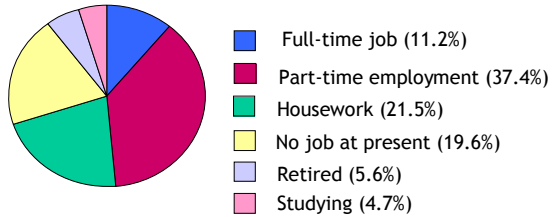
	Bipolar I Disorder	Schizoaffective Disorder
<i>n</i>	Females = 107 Males = 68	Females = 32 Males = 32
% of total sample	44.8% female	13.4% female
Nationality	Female = 97.2% Caucasian Males = 95.6% Caucasian	Female = 96.9% Caucasian Males = 100% Caucasian
Age	Females = 42.7 Males = 42.5	Females = 40.4 Males = 38.8
Mean age at onset	Females = 22.7 (n=93) Males = 24.9 (n=61)	Females = 22.2 (n=23) Males = 20.5 (n=26)

Initial Affective Episode - Bipolar Disorder

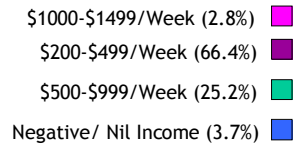


Initial Affective Episode (p= .005)

Income and Employment - Females with Bipolar Disorder (n=107)

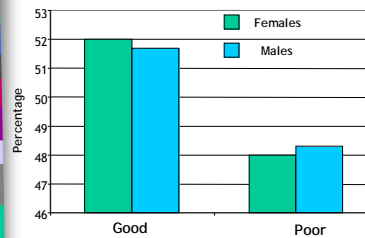


*vs. Australian Population Unemployment Rate: 5.1%
 **Australian Bureau of Statistics, (June 2005)

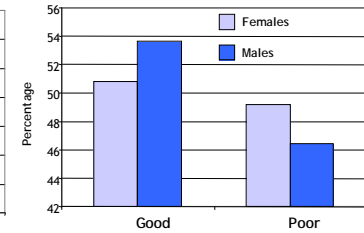


▪ General population - average weekly earnings (all employees): \$781.70 (ABS, Feb 2005 data)
 ▪ Source: Australian Bureau of Statistics. (2005). Year Book Australia - Income and Welfare. <http://www.abs.gov.au/Ausstats/abs@.nsf/0/9895157A356ED97BCA256F7200832FEA?Open>, viewed 11 JULY 2005. (time of data collection)

Quality of Life - Relationship with partner and children

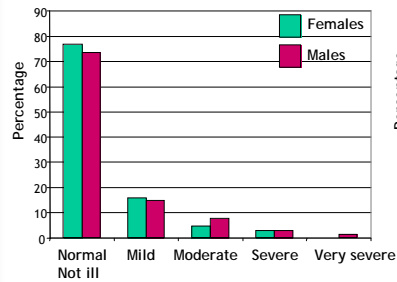


Relationship quality with partner ($p = .583$)

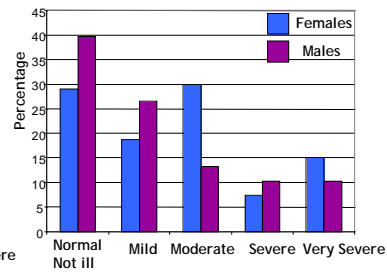


Relationship quality with children ($p = .495$)

Illness severity at baseline

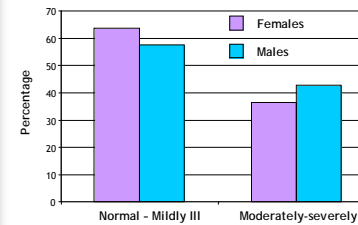


Mania severity - YMRS
($p=.274$)

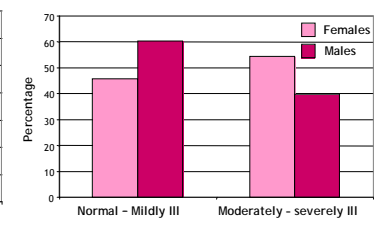


Depression severity - HAMD
($p=.031$)

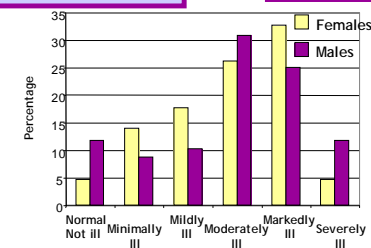
Illness Severity over previous 3 months



Mania - CGI scores ($p=.254$)

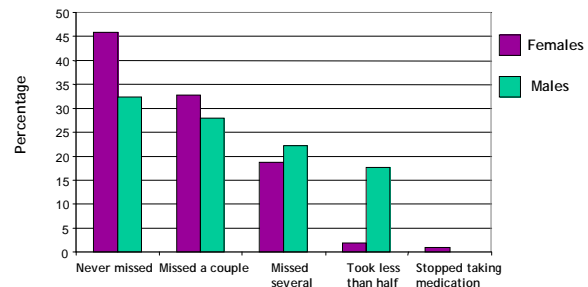


Depression - CGI scores ($p=.043$)



Bipolar - CGI scores ($p=.093$)

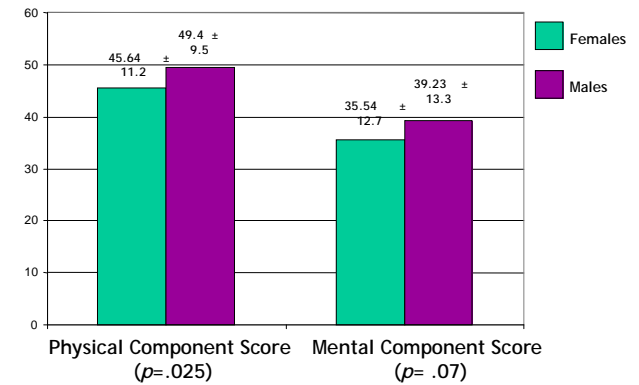
Treatment Adherence and Hospitalisation



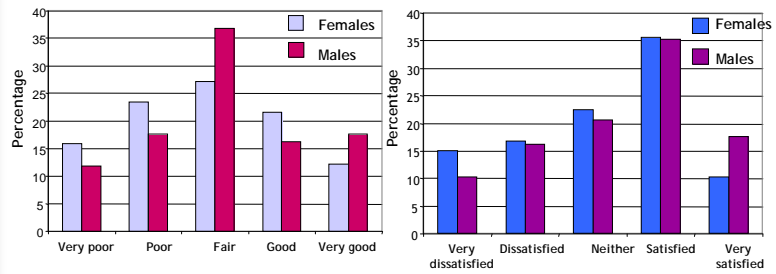
Self-reported compliance (p=.003)

- 27 females were hospitalised in the 3 months prior to baseline assessment. Two person 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



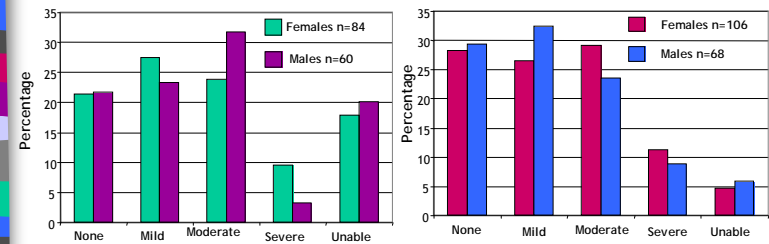
Quality of Life



Enjoyment of recreational activities ($p = .422$)

Satisfaction with life ($p = .648$)

Daily functioning



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

Level of household impairment ($p = .850$)

Substance use - Females (n=107)

Smoking	54.7% smoke daily 27.1% have never smoked
Cannabis	84.1% don't use 7.5% use monthly
Ecstasy	94.4% don't use 2.8% use monthly
Speed	93.5% don't use 2.8% use monthly
Alcohol	20% drink daily

General population: 22% adults were daily smokers (Australian Bureau of Statistics, 2001 Census).

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

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References

- Arnold L.M. Gender differences in bipolar disorder. *Psychiatr Clin Am* 2003; 595-620.
- Arnold, L., McElroy, S., Keck, P. The role of gender in mixed mania. *Compr Psychiatry*, 2000; 83-87.
- Baldassano, C.F. Illness comorbidity, gender and suicidality in patients with bipolar disorder. *J Clin Psychiatry* 2006; 8-11.
- Faedda, G.L., Tondo, L., Teicher, M.H., et al. Seasonal mood disorders: patterns of seasonal recurrence in mania and depression. *Arch Gen Psychiatry* 1993; 17-23.
- Goldney, R.D., Fisher, L.J., Dal Grande, E., Taylor, A.W., Hawthorne, G. Bipolar I and II disorders in a random and representative Australian population. *Aust NZ J Psychiatry* 2005; 726-729.
- Hendrick, V., Altushuler, L., Gitlin, M et al. Gender and bipolar illness. *J Clin Psychiatry*, 2000: 393-396.
- McElroy, S.L., Keck, P.E., Pope, H.G., Hudson, J.I. Faedda, G.L., Swann, A.C. Clinical and research implications of the diagnosis of dysphoric or mixed mania or hypomania. *Am J Psychiatry*, 1992: 1633-1644.
- Morgan, V.A., Mitchell, P.B., Jablensky, A.V. The epidemiology of bipolar disorder: sociodemographic, disability and service utilisation data from the Australian National Study of Low Prevalence (Psychotic) Disorder. *Bipolar Disord*, 2005; 326-227.
- Robb, J., Young, L., Cooke, R., Joffe, R. Gender differences in patients with bipolar disorder influence outcome in the medical outcomes survey (SF-20) subscale scores. *J Affect Disord*, 1998: 198-193.
- Surhail, K., Cochrane, R. Seasonal variations in hospital admission for affective disorders by gender and ethnicity. *Soc Psychiatry Psychiatr Epidemiol*, 1998; 211-217.
- Vigeara, A., Baldassarini, R., Tondo, L. Response to lithium maintenance treatment in bipolar disorders: comparison of women and men. *Bipolar Disord* 1993; 17-23.