



Review

Disorder-specific psychosocial interventions for bipolar disorder—A systematic review of the evidence for mental health nursing practice

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ABSTRACT

Aims: To systematically review the evidence for the efficacy of psychosocial interventions for bipolar disorder and examine the implications for mental health nursing practice.

Background: Bipolar disorder is associated with significant psychosocial impairment and high use of mental health services. Generally medication is effective in the treatment of acute episodes but there is increasing evidence that while a large majority of patients recover from these episodes of mania and/or depression, many do not achieve a functional recovery. In response a range of psychotherapies have either been adapted or developed.

Design: An extensive review of the literature was performed using Medline, Cinahl and PsycINFO databases and 35 relevant research studies were chosen that met inclusion criteria.

Findings: All the identified psychosocial interventions were structured, adhered to manualized protocols and had solid evidence demonstrating their effectiveness when used as an adjunct to psychopharmacology. The identified psychosocial interventions all incorporated some features of a psycho-education including developing an acceptance of the disorder, awareness of its prodromes and signs of relapse, and communication with others; and several emphasise regular sleep and activity habits.

Conclusion: Mental health nurses have an important role to play in integrating psychosocial interventions into their clinical practice settings and in conducting high quality trials of their clinical effectiveness. Nurses are well-positioned to lead pragmatic trials of the clinical effectiveness of these psychosocial interventions in mental health services because of their experience and expertise in working with patients with bipolar disorder.

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What is already known about this topic?

- Bipolar disorder is a chronic and recurring disorder associated with significant psychosocial impairment.
- A number of disorder-specific psychosocial interventions have been developed to address impairment.

What this paper adds

- The review identifies that a range of interventions have demonstrated efficacy in extended periods of euthymia, improved social and occupational functioning and alleviation of subsyndromal symptoms.
- The psychosocial interventions reviewed provide mental health nurses with evidence-based approaches to improving mental health care for patients with bipolar disorder.
- There is a need for mental health nurses to conduct high quality trials of the clinical effectiveness of these interventions.

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1. Introduction

Bipolar disorder is characterized by chronic and recurrent marked mood instability. Its course is typically hectic and variable with extreme highs and lows intermingled with mixed states and subsyndromal symptom flurries that create hybrid symptom states that defy easy labels (Frank et al., 2000). In the global burden of disease, bipolar disorder was ranked as the sixth leading cause of disability (World Health Organization, 2001). The disorder typically follows a chronic and/or recurring course and has equivalent rates for both genders (Oakley Browne et al., 2006). Studies have identified that the longitudinal course of both bipolar I and bipolar II disorders was chronic and primarily depressive (Judd et al., 2002). It has also been found that psychosocial disability fluctuates in parallel with changes in affective symptoms, and that subsyndromal depressive symptoms are associated with significant impairment (Judd et al., 2005).

The prevalence of bipolar disorder was traditionally thought to be about 1%, but higher rates of 3–8.8% are reported when hypomania, cyclothymia and subsyndromal symptoms are included (Kupfer et al., 2002). Bipolar disorder accounts for 60 days out of role per year and those who had the disorder experienced significantly more interference with life than was reported for any other mental disorder (Oakley Browne et al., 2006). A New Zealand study (Wheeler et al., 2005) found that bipolar disorder accounted for 26% of acute inpatient admissions. In Australia bipolar disorder accounted for 206,045 hospital patient (Australian Institute of Health and Welfare, 2004). The mean length of hospital stay in England was 58 days for patients with bipolar disorder (National Health Service, 2003). Angst and Sellaro (2000) found that patients with bipolar disorder who have been hospitalized spend about 20% of their lifetime from the onset of their disorder in episodes. They also found that 50% of bipolar episodes last between 2 and 7 months (median 3 months). The intervals between the first few episodes tend to shorten; later the episodes return at an irregular rhythm of about 0.4 episodes per year with high inter-individual variability. While symptoms are often common across groups of patients their course is highly individual.

Bipolar disorder is one of the most costly diseases, with emerging evidence suggesting that costs per patient can be greater than they are for other mental illnesses (Begley et al., 2001). While the direct health-care costs are high there are also intangible costs such as family burden and impaired health-related quality of life (Kleinman et al., 2003). Generally medication is effective in the treatment of acute episodes but there is increasing evidence that while a large majority of patients recover from these episodes of mania and/or depression, many do not achieve a functional recovery – only 40% of patients maintain their pre-morbid level of functioning, 25–35% experience partial impairment and 25–35% have profound functional deficits (Bauer et al., 2001; Judd et al., 2002; Keck, 2006). It is likely that a major reason

for the lack of functional recovery is the presence of syndromal and subsyndromal depression.

2. Background

The discovery of lithium carbonate as a treatment for bipolar disorder led researchers to conceptualize bipolar disorder as a purely biological process amenable to pharmacotherapy alone (Frank et al., 2000). However over the past two decades it has become evident that pharmacotherapy has failed to provide the treatment responses that could be expected if this was simply a biological condition. The seminal text on bipolar disorder (Goodwin and Jamison, 2007) has proposed an interplay between biological and psychosocial, and while recognizing the primacy of biology, they hypothesized that it was related to the circadian pacemaker and psychosocial factors. They postulated that psychosocial factors will interact with biology to create three probable pathways to recurrence of bipolar illness: (1) stressful life events; (2) disruptions in social rhythms; and (3) medication non-adherence.

Perlis et al. (2006) has identified that even patients receiving optimal medication are likely to have recurrences, have trouble holding jobs, maintaining relationships and getting along with significant others. As hospitalizations have become shorter, and as patients are discharged in relatively unstable states the burden on family and community mental health services is considerable (Perlick et al., 2001). In response to the poor functional recovery and on-going subsyndromal symptoms associated with bipolar disorder, in conjunction with the inadequacy of pharmacotherapy to fully address these issues, a range of psychotherapies have either been adapted or developed for the treatment of this chronic and cyclic disorder.

A review of the nursing literature identified that mental health nurses were delivering a range of disorder-specific psychotherapies in practice: cognitive therapy for psychosis (England, 2007; Freeman and Freeman, 2004; Turkington et al., 2002), interpersonal psychotherapy for depression (Crowe and Luty, 2005a,b), interpersonal social rhythm therapy for bipolar disorder (Crowe et al., 2009). Given the prevalence of patients with bipolar disorder in all mental health care settings and the limited efficacy of psychopharmacology there is surprisingly little nursing research into the disorder, although there is some (Davies et al., 2008; Goossens et al., 2007; Jonsson et al., 2008; Tranvag and Kristoffersen, 2008).

Given the disabling and chronic nature of bipolar disorder, the limited efficacy of medication alone, and the high rates of mental health service utilization the authors were prompted to explore how the delivery of mental health nursing care to patients could be improved by examining which psychosocial interventions were effective and how they could be delivered by nurses. This process involved undertaking a systematic review of the published evidence for the efficacy of disorder-specific psychosocial interventions and examining the implications of these findings for mental health nursing practice.

3. Method

3.1. Question

For people with bipolar disorder are disorder-specific psychosocial interventions as an adjunct to medication more effective than usual care in improving symptoms, relapse and functioning?

3.2. Search strategy

Databases search included: CINAHL, MEDLINE, PsycINFO and manual searching. The Keywords were: bipolar disorder, psychosocial intervention, therapy, and psychotherapy.

3.3. Criteria for considering studies

The following inclusion criteria were determined as they captured the focus of the research question and reflected both clinical and research requirements, i.e., clinical guidelines for the treatment of bipolar disorder identify the need for medication; a preliminary review of the literature identified the need to focus on disorder-specific interventions and in order to examine effectiveness it was necessary to include only those studies that provided patient outcomes using validated measurement instruments and utilized a control group (usually treatment as usual). This would enable the review to identify if patient outcomes were specific to the intervention.

1. Psychosocial interventions specific to bipolar disorder.
2. Interventions were adjunctive to pharmacotherapy.
3. Participants 18 years +.
4. Results focussed on patient outcomes.
5. Reported outcome data using any measurement instrument.
6. Experimental design.
7. Published between 1990 and 2009.

3.4. Assessment of relevance for inclusion in the review

The abstracts of all studies identified by the search strategies were examined. Those that were considered to evaluate a psychosocial intervention for bipolar disorder were identified for more detailed examination. The full-text version of these studies was then obtained.

3.5. Study quality assessment

The quality of the identified trials was assessed using the following criteria that were adapted from previously published systematic reviews (Bee et al., 2008; Curran and Brooker, 2007) and enabled us to assess the intervention and control situation, research design, sampling and conclusions:

- Identified aims congruent with methodology and measurements.
- Sufficient details of treatment and control conditions reported.

Table 1
Types of intervention.

Family intervention	10
Psycho-education	10
Cognitive therapy	7
Interpersonal social rhythm therapy	3
Chronic/systematic care	3
Intensive therapies	2

- Sampling method, size (with power calculations where appropriate) and patient demographic characteristics provided.
- Methods for blinding randomization and measurement.
- Validated measures.
- Details of intention to treat and statistical analyses.
- Findings presented with sufficient detail to assess significance (where appropriate).
- Conclusions reflected in the results from the study.

The assessment of which studies to include was conducted by four investigators (MC, LW, AO, DC) who initially met to discuss the quality criteria and worked on sample papers to ensure reliability. Each paper was then assessed independently by two investigators and any differences in assessment were resolved in a team meeting. The full assessment of quality was conducted by two investigators (MC, LW) using the Meta-Analysis of Statistics Assessment and Review Instrument (MASTARI) software developed by the Joanna Briggs Institute. The process was managed by a research assistant (LW).

4. Findings

Thirty-five studies met the quality criteria for inclusion in the review. The studies were grouped into one of five categories: group psycho-education, family intervention, interpersonal social rhythm therapy, cognitive behavioural therapy, chronic/systematic care; and research into intensive therapies in general was also included. Table 1 provides the numbers of studies in each category

The details of each of the included studies are provided in Table 2.

4.1. Group psycho-education

Several studies (Colom and Lam, 2005; Colom et al., 2003a,b, 2004, 2005) have demonstrated that including group psycho-education as an adjunct to psychopharmacology is effective in reducing the number of relapsed patients and the number of recurrences per patient, and in increasing the time to depressive, hypomanic and mixed recurrences. This reduction was maintained at two- and five-year follow-up. The group treatment involved 21 sessions of 90 min each aimed at improving four main issues: illness awareness, treatment compliance, early detection of prodromal symptoms and recurrences and lifestyle regularity. Each group consisted of 8–12 patients and was conducted by an experienced psychologist. The structure of each session consisted of a 30–40 min speech on the topic of the day, followed by an exercise related to

Table 2
Outcomes of qualitative analysis.

Authors	Intervention	Inclusion	Exclusion	#	Measures	Results
Clarkin et al. (1990)	TAU plus family intervention vs TAU			50	GAS, Role Performance Treatment Scale, Family Attitude Inventory	Female bipolar patients and their families benefited from the family intervention
Clarkin et al. (1998)	Psycho-education plus marital intervention vs Family-focused therapy vs crisis management	In episode lithium or carbamazepine	Alcohol or drug abuse	46	SADS-C, GAS, medication adherence	Mean level of medication adherence was significantly higher in experimental group
Miklowitz et al. (2000)	Family-focused therapy vs crisis management	Episode in previous 3 months. Regular contact with family	Alcohol or drug disorders in past 6 months	101	SADS-C, medication self-report	FFT had fewer relapses and longer delays before relapse during study year and showed greater improvements in depressive (but not manic) symptoms
Miklowitz et al. (2003a,b)	Integrated family and individual therapy (<50 weekly sessions)	Living with caregiver	Alcohol or drug disorders in past 6 months	30	SADS-C	IFIT had longer survival intervals and showed greater reductions in depressive symptoms over 1 year of treatment
Miklowitz et al. (2003a,b)	Family-focused therapy vs crisis management	Episode in previous 3 months. Regular contact with family	Alcohol or drug disorders in past 6 months	101	SADS-C, medication self-report	FFT had fewer relapses and longer survival intervals. Patients undergoing FFT showed greater reductions in mood disorder symptoms and better medication adherence
Miller et al. (2004)	Family therapy vs multi-family group psycho-education vs pharmacotherapy	Current episode, living with or contact with family	A and D dependence	92	HAM-D, Bech-Rafaelsen	The proportion of subjects within each treatment group who recovered did not significantly differ, nor did time to recovery
Miller et al. (2008)	Family therapy vs multi-family group psycho-education vs pharmacotherapy	Current episode, living with or contact with family	A and D dependence	92	HAM-D, Bech-Rafaelsen	No significant main effects were found for treatment condition. The addition of a family intervention did not improve outcome
Rea et al. (2003)	9-Month family-focused psycho-educational therapy vs individual	Recently hospitalised patients with mania	Chronic alcohol or drug abuse or dependence	53	SAS, Brief Psychiatric Rating Scale, SADS-C	Family-focused treatment less likely to be re-hospitalised during the 2 year study period and experienced fewer mood disorder relapses over 2 years although they did not differ in their likelihood of a relapse
Solomon et al. (2008)	Individual family therapy vs multi-family group therapy vs pharmacotherapy	Family actively involved	A and D dependence	92	HAM-D, BRMS	5% of adjunctive multi-family group therapy required hospitalization, compared to 31% adjunctive individual family therapy and 38% of those receiving pharmacotherapy No differences time to recurrence and time to hospitalization
Castle et al. (2007)	Group-based therapy vs telephone calls	Mild symptoms severity	Not identified	20	MADR5, YMRS, GAF, WHOQoLBREF, Medication Adherence Rating Scale	Functioning was significantly improved in the intervention group and improvement in social relationships and a positive trend in reduction of relapses in intervention group
Colom et al. (2003a,b)	Group psycho-education vs group meetings	6 months euthymia	Other Axis 1 comorbidity	121	YMRS, HDRS-17	Psycho-education significantly reduced the number of relapsed patients and the number of recurrences per patient and increased time to depressive, manic, hypomanic and mixed recurrences
Colom et al. (2003a,b)	Group psycho-education vs group meetings	Euthymic for >6 months and fully compliant	Other Axis 1 comorbidity	50	YMRS, HDRS-17	2-year follow-up 92% of control group met criteria for recurrence vs 60% in psycho-education group. Number of recurrences and number of depressive episodes significantly lower

Table 2 (Continued)

Authors	Intervention	Inclusion	Exclusion	#	Measures	Results
Colom et al. (2004)	Group psycho-education vs group meetings	6 months euthymia BPD	Other Axis 1 comorbidity	37	YMRS, HDRS-17	At 2 years 100% of control group fulfilled criteria for recurrence vs 67% in intervention group.
Colom et al. (2005)	Group psycho-education vs group meetings	6 months euthymia	Other Axis 1 comorbidity	121	Plasma lithium levels were obtained at 5 time points: baseline, 6, 12, 18 and 24 months	Mean serum lithium levels were significantly higher for patients receiving psycho-education and were relatively stable and were always higher than mean baseline
Colom (2009)	group psycho-education vs group meetings	6 months euthymia	Other Axis 1 comorbidity	121	YMRS, HAM-D	At the 5-year follow-up, time to any recurrence was longer for the psycho-education group
de Andrés et al. (2006)	Life goals program	Mild or medium episode	Psychotic or under influence of alcohol/ drugs	45 (17)	MADRS, BRMS	After attending phase 2 of program participants reported subjective improvement in mood stability, relapse prevention strategies as well as coping
Depp et al. (2007)	Psycho-education intervention - 12 weeks	Aged over 50 years (mean 60 years)	Substance use disorder within 3 mths	21	Tablet Routine questionnaire, Medication Management Ability Assessment, MADRS, YMRS and SF-36	High levels of satisfaction and small to medium effects sizes in medication adherence, medication management, depressive symptoms and selected indices of health-related quality of life
Perry et al. (1999)	7–12 counselling sessions vs routine care	Relapse in past 12 months	Drug or alcohol misuse or dependence	69	Self-report interview and patient notes	In the group with counselling length of time until manic relapse was 65 weeks compared to 17 weeks without it
Reinares et al. (2008)	12 × 90-min group psycho-education vs no intervention	Euthymic living with care-giver	Axis 1 disorder, instability	113	HAM-D, YMRS	Psycho-education group intervention focused on the care-givers reduced percentage of patients with any mood recurrence and longer relapse-free intervals
Ball et al. (2006)	6 months CT vs TAU out-patient	Euthymic, mildly depressed or hypomanic	Moderate to severe mood episode, suicidal ideation, schizophrenia or schizoaffective, ASPD, BPD	52	SPS, GAF, SAS HAM-D-17, YMRS, BDI, BHS, ISS, ATQ	CT had less severe depression scores Statistical trend to greater time to depressive relapse for CT. At 12-month follow-up CT showed trend towards lower mania ratings
Lam et al. (2000)	6 months CBT vs TAU out-patient	>2 episodes in previous 2 yrs or 3 in last 5 yrs.	Schizoaffective, current rapid cycling/ mixed affective episode or acute, primary A & D problem	25	MRS, ISS, BDI, Coping with Bipolar Prodromes Schedule, medication compliance questionnaire, DAs	Therapy group had significantly fewer bipolar episodes, higher social functioning and better coping strategies for bipolar prodromes
Lam et al. (2003)	CBT vs medication Out-patient	>2 episodes last 2 yrs or 3 in last 5 yrs	Suicidal, substance use disorder, not depressed or manic.	103	MRS, ISS, BDI, Coping with Bipolar Prodromes Schedule, medication compliance questionnaire, DAs	During the 12-month period, the CT group had significantly fewer bipolar episodes, days in bipolar episode

Lam et al. (2005)	CBT vs medication Out-patient	>2 episodes last 2 yrs or 3 in last 5 yrs	Suicidal, substance use disorder, not depressed or manic.	103	MRS, ISS, BDI, Coping with Bipolar Prodromes Schedule, medication compliance questionnaire, DAs	Over 30 months CT group had significantly better outcome in terms of time to relapse. However relapse prevention was mainly in first year
Scott (2001)	6 months CT vs 6mths wait-list then CT	>1 episode last 2 yrs	BP secondary to organic disorder, severe physical ill-health, cognitive impairment	42	BDI, ISS, GAS	At 6-month follow-up, subjects allocated to CT showed statistically significantly greater improvements in symptoms and functioning
Scott et al. (2006)	CBT vs TAU	>2 mood episodes within 12 months,	Rapid cycling, severe BPD with suicidal ideation, continuous illicit substance misuse, mania	253	LIFE	More than half of the patients had a recurrence by 18 months with no significant differences between groups. Post hoc analysis significant interaction such that adjunctive CBT was significantly more effective than treatment as usual in those who had fewer than 12 episodes, but less effective with more episodes
Zaretsky et al. (2008)	Psycho-education plus CBT vs psycho-education	Not currently in episode	Schizoaffective, ASPD, suicidal ideation in last month, alcohol or substance abuse	79	HDRS, CARS-M, SAS, quality of life measure	CBT in addition to PE experienced 50% fewer days of depressed mood over one year. No group differences in hospitalization rates, medication adherence, psychosocial functioning
Frank and Maibach (1997)	IPSRT vs CSSRT	18–60 years in their >3rd lifetime affective episode	Not described	38	Social Rhythm Matrix	IPSRT significantly greater stability of daily routines while patients in control group showed no change
Frank et al. (2005)	2.5 years acute and maintenance IPSRT vs acute/maintenance ICM vs acute IPSRT/maintenance ICM vs acute ICM/maintenance IPSRT	18–60 years in their >3rd lifetime affective episode	Rapid cycling; chronic drug or alcohol abuse, full criteria for borderline or anti-social personality disorder, active bulimia or anorexia	175	HAM-D, BRMS	No differences in time to stabilization observed. Participants assigned to IPSRT in acute phase survived longer without a new affective episode. Ability to increase regularity of social rhythms during acute treatment was associated with reduced likelihood of recurrence in maintenance phase
Frank et al. (2008)	As above	Acutely unwell	Rapid cycling; chronic drug or alcohol abuse, full criteria for borderline or anti-social personality disorder, active bulimia or anorexia	175 (125)	HAM-D, BRMS, UCLA social attainment scale	Patients initially assigned to IPSRT showed more rapid improvement in occupational functioning than those who received ICM in acute phase
Bauer et al. (2006)	3 year chronic care model vs TAU	Diagnosis	Not in current care	306	LIFE, SAS, SF-36	CCM significantly improved weeks in affective episode, primarily mania. Broad-based improvements in social role function, quality of life, and treatment satisfaction. Intervention was cost-neutral
Simon et al. (2005)	TAU plus a systematic care management vs TAU	Diagnosis	Not in current care	441		Intervention group had significantly lower mean mania ratings averaged across the 12 month follow-up period and approximately one-third less time in hypomanic or manic episode and showed a greater decline in depression ratings

Table 2 (Continued)

Authors	Intervention	Inclusion	Exclusion	#	Measures	Results
Simon et al. (2006)	TAU plus a systematic care management vs TAU	Diagnosis	Not in current care	441	Psychiatric Status Rating, LIFE, resource use data	Intervention significantly reduced the mean level of mania symptoms and the time with significant mania symptoms. There was no significant intervention effect on mean level of depressive symptoms or time with significant depressive symptoms weeks
Miklowitz et al. (2006)	Intensive psychotherapy (IPSRT, Family or CT) vs collaborative care	Depressed phase	Substance and alcohol abuse; contraindication paroxetine or bupropion	248	MADRS, YMRS, LIFE	Among patients who began an interval with severe depressive symptoms or low functioning, having more frequent sessions of psychotherapy was associated with less severe depressive symptoms and greater functioning in the same or subsequent interval
Miklowitz et al. (2007)	Intensive psychotherapy (IPSRT, Family or CT) vs collaborative care	Depressed phase	Substance and alcohol abuse; contraindication paroxetine or bupropion	293	MADRS, YMRS	Patients receiving intensive psychotherapy had significantly higher year-end recovery rates and shorter times to recovery than patients in collaborative care. No statistical differences between 3 intensive therapies

the issue (e.g., drawing a life chart, writing a list of 10 potential triggers, writing a list of 10 behavioural indicators of depressive prodromes and 10 for manic prodromes), and a discussion. The goals addressed by the groups were (1) illness awareness, early detection of prodromes and treatment compliance; (2) stress management, substance abuse avoidance, inducing lifestyle regularity, and preventing suicidal behaviour; and (3) enhancing knowledge and coping with psychosocial consequences of past and future episodes, improving interpersonal and social inter-episodic functioning, coping with subsyndromal, residual symptoms and impairment, and increasing well-being and improving quality of life. It is worth noting that the study also provided an open-door policy for medication management throughout the study and the follow-up period.

A smaller study (Perry et al., 1999) that used self-report and patient notes to measure outcomes found that those who attended the group sessions had a longer time to manic relapse. Time to depression was not assessed. The other studies of group psycho-education (Castle et al., 2007; de Andrés et al., 2006) had recruited smaller numbers ($n \geq 20$) and delivered the intervention for between 6 and 12 weeks. Although there were small numbers involved, these studies demonstrated that group psycho-education was effective in improving the symptoms of bipolar disorder in comparison with a control group receiving treatment as usual.

The use of group psycho-education for older patients with bipolar disorder was examined in a pilot study conducted by Depp et al. (2007). The intervention was delivered to 21 patients aged over 50 years (mean 60 years). Pre- and post-testing identified small to medium effects sizes in medication adherence, medication management, depressive symptoms and selected indices of health-related quality of life.

There is good evidence that group psycho-education, particularly the highly structured 21 session model with easy access to medication management, is effective in reducing the recurrence of mood episodes over 5 years of follow-up treatment.

The primary investigator in these studies (Colom, 2009) has suggested that mental health nurses are the best discipline to deliver this intervention because of their experience and skills in caring for people with bipolar disorder which he regarded as central to its delivery. A manual has been developed outlining the specific elements of the intervention (Colom and Viera, 2006).

4.2. Interpersonal social rhythm therapy

To date the research group led by Ellen Frank has conducted most of the trials into interpersonal social rhythm therapy. In a four treatment strategies randomized controlled trial 175 acutely ill patients were randomly assigned to acute and maintenance interpersonal social rhythm therapy, acute and maintenance intensive clinical management, acute interpersonal social rhythm therapy followed by maintenance intensive clinical management, acute intensive clinical management followed by maintenance interpersonal social rhythm therapy (Frank et al.,

2005). Participants assigned to interpersonal social rhythm therapy in acute phase survived longer without a new affective episode than those assigned to intensive clinical management. The researchers found the ability to increase regularity of social rhythms during acute treatment was associated with reduced likelihood of recurrence in the maintenance phase. In this study participants were seen weekly until stabilization was achieved and then every other week for 12 weeks in the acute phase; and then monthly for 2 years in the maintenance phase. The intensive case management/interpersonal social rhythm therapy group was seen weekly for 12 weeks at the commencement of the interpersonal social rhythm therapy maintenance period. No changes were made to medications in the maintenance phase.

Interpersonal social rhythm psychotherapy combines the techniques of interpersonal psychotherapy with the use of a social rhythm matrix to promote lifestyle regularity. The treatment focuses on the links between mood symptoms and quality of social relationships and social roles, the importance of maintaining daily routines and the identification and management of potential precipitants of rhythm disruption.

There is good evidence that interpersonal social rhythm psychotherapy when used acutely as an adjunct to pharmacotherapy is effective in reducing mood episodes over the 2 years of treatment. There is also evidence that patients who receive this treatment in the acute phase showed more rapid improvement in occupational functioning than those who received intensive case management in acute phase (Frank et al., 2008).

Mental health nurses with training in interpersonal psychotherapy and experience in caring for people with bipolar disorder can deliver interpersonal social rhythm therapy with regular supervision from experienced supervisors. There is however limited availability of training programmes internationally although this is changing with courses available in the United States, United Kingdom, Italy, Germany, Holland, Canada and New Zealand. A manual describing the therapy has been developed by Frank (2005).

4.3. Family interventions

Several studies of family interventions have also been published. These interventions were primarily psycho-educational in approach although some studies described using family therapy techniques. The family-focused treatment used in the Colorado group's studies (Miklowitz et al., 2000, 2003b) involving treatment of 101 patients with bipolar disorder, involved 9 months of treatment in the patients' or their parents' home. It involved all available family members and was administered in 21 1-h sessions (12 weekly, then 6 biweekly then 3 monthly). The modules included psycho-education (signs and symptoms, aetiology and strategies for prevention of relapse), communication enhancement (active listening, delivering positive and negative feedback) and problem-solving skills (identification of specific family problems and brainstorming potential solutions). Treatment was delivered by trained therapists according to manual

protocol but their professional qualifications were not described.

The results of these studies identified good effects. Miklowitz et al. (2000) found that patients assigned to family-focused psycho-education had fewer relapses and longer delays before relapse during study year. They showed greater improvements in depressive (but not manic) symptoms. During follow-up, this group had fewer relapses and longer survival intervals and showed greater reductions in mood disorder symptoms and better medication adherence (Miklowitz et al., 2003b). Rea et al. (2003) found that compared with patients in individual therapy those in family-focused treatment were less likely to be re-hospitalized during the 2 year study period. Patients in family treatment also experienced fewer mood disorder relapses over 2 years although they did not differ in their likelihood of a relapse.

The results from other studies have been mixed with Miller et al. (2004, 2008) finding no significant main effects for the treatment condition and that the addition of a family intervention did not improve outcome. Clarkin et al. (1990) found some improvements for female bipolar patients and their families benefited from the family intervention. Solomon et al. (2008) found that of the 53 subjects who recovered from their intake mood episode, the proportion of subjects within each treatment group (family therapy plus pharmacotherapy, multi-family therapy plus pharmacotherapy, and pharmacotherapy alone) who suffered a recurrence by month 28 did not differ significantly between the three treatment conditions. However, only 5% of the subjects receiving adjunctive multi-family group therapy required hospitalization, compared to 31% of the subjects receiving adjunctive individual family therapy and 38% of those receiving pharmacotherapy alone, a significant difference.

A study of combined individual and family therapy (Miklowitz et al., 2003a) found that patients who received this therapy had longer survival intervals than controls and showed greater reduction in depressive symptoms. This therapy involved 25 sessions of interpersonal social rhythm therapy and 25 sessions of family-focused therapy provided in alternating weeks.

While not unequivocal there is evidence that family interventions can contribute to improvements in depressive symptoms and medication adherence. The intervention requires active involvement of family members and the sample for these studies excluded alcohol and drug disorders within the past 6 months. Because of mental health nurses' regular involvement with both patients and their families this may be a useful intervention for practice and has been described in detail by Miklowitz (2008).

4.4. Cognitive behavioural therapy

Cognitive behavioural therapy has been modified for use with patients with bipolar disorders. The modifications include a psycho-education model of bipolar illness as a diathesis-stress illness, cognitive behavioural skills to cope with prodromes, importance of routine and sleep, and dealing with long-term vulnerabilities and difficulties as a result of the illness (Lam et al., 2000).

One of the first studies was a small pilot study ($n = 20$) conducted by Lam et al. (2000) who found that the therapy group had significantly fewer bipolar episodes, higher social functioning and better coping strategies for bipolar prodromes. When this study was expanded into a randomized controlled trial with 103 patients they found that during the 12-month period, the cognitive therapy group had significantly fewer bipolar episodes, days in a bipolar episode, and number of admissions. They also had significantly higher social functioning. During the follow-up period over 30 months these effects dropped away and although the cognitive therapy group had significantly better outcome in terms of time to relapse this was mainly during the first year (Lam et al., 2005).

In another pair of studies that began with a small pilot study (Scott, 2001) it was found that at 6-month follow-up, subjects allocated to cognitive therapy had fewer relapses. In the 29 patients who received cognitive therapy, relapse rates in the 18 months after commencing cognitive therapy showed a 60% reduction in comparison with the 18 months prior to commencing. In the larger randomized controlled multi-site trial of 253 patients (Scott et al., 2006) randomized to either control or cognitive therapy it was found that at 18 months more than half of the patients had a recurrence and there were no significant differences between groups. A post hoc analysis, however, demonstrated a significant interaction such that adjunctive cognitive therapy was significantly more effective than treatment as usual in those who had fewer than 12 episodes, but less effective in those with more episodes.

A smaller Australian study (Ball et al., 2006) of 52 patients randomized to control or cognitive therapy for 6 months found that at post-treatment patients allocated to cognitive therapy had less severe depression scores and less dysfunctional attitudes. There was a statistical trend to greater time to depressive relapse for this group and at 12-month follow-up the cognitive therapy group showed a trend towards lower mania ratings and improved self-control. A Canadian study (Zaretsky et al., 2008) evaluated psycho-education vs psycho-education plus cognitive therapy with 79 patients and found that participants who received cognitive therapy in addition to psycho-education experienced 50% fewer days of depressed mood over the course of 1 year but there were no differences in hospitalization rates, medication adherence, psychosocial functioning, or mental health use.

The evidence suggests that there are good short-term results for cognitive therapy although this evidence is restricted to patients with <12 episodes. The two largest studies were quite different in their sample characteristics and delivery of the intervention. The Scott et al. (2006) study was a multi-site pragmatic study that included patients in episode in 'real-life' clinical settings and the sample excluded those who had rapid cycling, borderline personality disorder with suicidal ideation or intent in the past 3 months, continuous illicit substance misuse or were in a manic phase. Given that there is existing mental health nursing interest and training in cognitive therapies it is feasible that nurses could implement these strategies in practice. A manual of the modifications made for cognitive therapy has been developed by Lam et al. (1999).

4.5. Systematic/chronic care models

There have been two large clinical effectiveness studies of chronic care/systematic care models – (Simon et al., 2006) $n = 441$ and (Bauer et al., 2006) $n = 306$. These treatments involve weekly group psycho-education sessions for 5 weeks followed by twice monthly sessions for 2–3 years. Patients were supported by nurse care managers during this time who provided general support, encouragement to attend group sessions, and brief education regarding medication and side-effects, and warning signs of relapse. They also facilitated follow-up care, and provided supplemental phone contact, crisis intervention, outreach and co-ordination with family members and assistance with barriers to treatment.

Bauer et al. (2006) found that the intervention significantly reduced weeks in affective episode, primarily mania. Broad-based improvements were demonstrated in social role function, quality of life, and treatment satisfaction. However, reductions in mean manic and depressive symptoms were not significant. Simon et al. (2005) found that participants assigned to the intervention group had significantly lower mean mania ratings averaged across the 12-month follow-up period and approximately one-third less time in hypomanic or manic episodes. Mean depression ratings across the entire follow-up period did not differ significantly but intervention group showed a greater decline in depression ratings over time. Follow-up measures identified that the intervention significantly reduced the mean level of mania symptoms and the time with significant mania symptoms but there was no significant intervention effect on mean level of depressive symptoms or number of weeks with significant depressive symptoms (Simon et al., 2006).

There is evidence that these interventions reduced the length of time in manic episodes, quality of life and social functioning, but there was no evidence for reduction in depressive episodes. The point of difference from usual care in these studies was that both utilized a chronic care model of delivery for 2–3 years, however the content of the care delivered could be regarded as 'good usual care'. The intervention was delivered primarily by mental health nurses but there was no description of whether additional specialist training was required.

4.6. Intensive therapies

Miklowitz et al. (2006) examined the data of patients with bipolar disorder in depressed phase enrolled in Systematic Treatment Enhancement Program for Bipolar Disorder and interviewed them regularly to evaluate the effects of the three psychotherapies $n = 163$ (family-focused therapy, interpersonal social rhythm therapy and cognitive behavioural therapy) and those receiving collaborative care ($n = 130$). They found that among patients who began an interval with severe depressive symptoms or low functioning, having more frequent sessions of psychotherapy was associated with less severe depressive symptoms and greater functioning in the same or subsequent interval. A subsequent analysis found that patients receiving intensive psychotherapy had signifi-

cantly higher year-end recovery rates and shorter times to recovery than patients in collaborative care (Miklowitz et al., 2007). There were no statistical differences between three intensive therapies.

There is evidence that intensive psychotherapies are effective in improving recovery rates and time to recovery with no evidence to support one psychotherapy as superior to the others.

5. Summary

All interventions described have solid evidence demonstrating their effectiveness when used as an adjunct to psychopharmacology. All interventions were structured and adhered to manualized protocols. All incorporated some features of a psycho-education including developing an acceptance of the disorder, awareness of its prodromes and signs of relapse, and communication with others; and several emphasise regular sleep and activity habits. The number of sessions varied but were <30, and most interventions provided clinical follow-up after the intervention period. Only the chronic/systematic care model and one cognitive study (Scott et al., 2006) have been evaluated for clinical effectiveness in large clinical populations. Many of the interventions require significant periods of euthymia before commencement with the notable exception of the Systematic Treatment Enhancement Program for Bipolar Disorder studies; and most were conducted in out-patient predominantly female populations.

All interventions are applicable to mental health nursing practice and most have manuals available that detail the specific aspects of the interventions. However, training opportunities for most mental health nurses are limited, with cognitive therapy training being the most easily accessed. Implementation of these interventions would require resource support and a commitment to mental health care delivery that was focused on the long-term recovery process for patients with bipolar disorder. When interventions were assessed for cost-effectiveness they were generally found to be cost-neutral in the short-term but the long-term cost-effectiveness would be greater given bipolar patients' current high-usage of mental health services and their impaired social and occupational functioning.

6. Discussion

A major limitation of this review was that we were unable to perform a meta-analysis because of discrepancies in the reporting of data in these trials. There was a lack of consistency in outcome measures with a range depression, mania, and functioning rating scales, however there was more consistent use of the Longitudinal Interview Follow-up Evaluation (Keller et al., 1987). A calculation of trial effect sizes was not calculated in this study but has been provided by Miklowitz and Scott (2009) who identified that the interventions included in our review are effective in reducing rates of relapse in bipolar disorder (OR = 0.57; 95% CI: 0.39–0.82) over 1–2 years. A similar systematic review conducted by Beynon et al. (2008) found

no evidence from which to draw conclusions regarding the relative efficacy of the different psychosocial interventions and that there was insufficient data and a lack of common comparators to conduct an indirect meta-analysis of the different interventions across trials. A systematic review of clinical and cost-effectiveness of interventions to prevent relapse in bipolar disorder (Soares-Weiser et al., 2007) also found that none of the psychosocial interventions could be linked into the network of evidence because of a lack of common comparators. While there is always an element of subjectivity in the qualitative assessment of trials, attempts were made to reduce this by establishing inclusion criteria and having two investigators independently rate each paper with a third investigator arbitrating discrepancies.

These studies have identified the efficacy of these psychosocial interventions in the populations upon which they were trialed. However, studies such as those by Scott et al. (2006) in which they attempted to recruit from the full range of patients in the National Health Service, leaves some doubt as to the effectiveness across the full range of bipolar patients in public mental health services. Many of the studies excluded comorbid Axis I disorders generally despite their prevalence of their comorbidity with bipolar disorder (Merikangas et al., 2007). Most of the studies also excluded alcohol and substance use disorders. Substance dependence is common among patients with bipolar disorder (Mitchell et al., 2007) and bipolar patients with comorbid substance abuse may have a more severe course (Cassidy et al., 2008).

A number of studies also excluded borderline and anti-social personality disorder. A study conducted by O'Connell et al. (1991) found that over one half of the patients (58%) met criteria for one or more personality disorders. The majority of the Axis II diagnoses were from cluster B, with borderline the most prevalent, followed by histrionic. A study of anti-social personality disorder and severe psychiatric and substance use disorders (Mueser et al., 2006) found that 21% of patients who had bipolar disorder also met full criteria for anti-social personality disorder.

The other exclusion criterion in one of the large-scale trials was an active eating disorder. In an epidemiological study McElroy et al. (2005) found an association between hypomania and eating disorders, especially binge-eating behaviour. In a study of females with bipolar disorder (Fornaro et al., 2009, on-line) 31% reported lifetime history of at least one eating disorder: anorexia nervosa was the most common eating disorder (15.5%), followed by binge-eating disorder (14.2%), and bulimia nervosa (5.4%).

Psychosocial stress plays an important role at multiple junctures in the onset and course of bipolar disorder and an array of stressors may be relevant not only to the onset, recurrence, and progression of affective episodes, but also the highly prevalent substance abuse comorbidities. While there is convincing evidence from this review that psychosocial interventions yield better outcomes than treatment as usual these approaches do not appear to be frequently or systematically employed in clinical practice, and this may contribute to the considerable residual morbidity and mortality associated with conventional treatment (Post and Leverich, 2006).

7. Conclusion

Psycho-pharmacological-only interventions are not effective for the management of bipolar disorder primarily because of high rates of non-adherence. Angst and Sellaro (2000) found in a review of two centuries of literature on bipolar disorder that the findings of modern follow-up studies are closely compatible with those of studies conducted before the introduction of modern antidepressant and mood-stabilizing treatments. Medication alone is an insufficient treatment. Mental health nurses may have an important role to play in integrating psychosocial interventions into their clinical practice settings and in conducting high quality trials of their clinical effectiveness. Nurses are well-positioned to lead pragmatic trials of the clinical effectiveness of these psychosocial interventions in mental health services because of their experience and expertise in working with patients with bipolar disorder. The interventions require more than telling patients and their families about the effects and management of bipolar disorder; they required structured interventions of up to 2 years duration that enable the patient to develop the skills required to manage the specific characteristics of their bipolar disorder. This would require organizational change to support the interventions and requires an emphasis on long-term follow-up and an open-door policy for access to services. Increased initial costs, skill development and more long-term structured involvement with the patient and family are more likely to be associated with health gains and/or reductions in resource utilization in the medium to long-term (Miklowitz and Scott, 2009).

While all the intensive psychosocial interventions demonstrate efficacy it is perhaps the group psychoeducation based on Colom and Viera's (2006) manual that could most easily be implemented by mental health nurses. It requires 21 structured sessions delivered by two trained mental health nurses. The group structure provides the opportunity for modelling, training, support and self-awareness. The training for this intervention involves a 12-h technical workshop and experience in working in a client-focused and empowering approach with people with bipolar disorder. This is a recovery-based approach that encourages self-management and focuses on adherence enhancement, identification of subtle early warning signs, lifestyle regularity and illness awareness. It is also an approach that utilizes some aspects of other effective therapies, e.g., lifestyle regularity, illness timelines and has very good evidence of sustained improvements over five years.

The current dearth of nursing research into bipolar disorder may be the consequence of the erroneous view that medication, particularly mood stabilizers, would successfully treat bipolar disorder. If we are to provide recovery-focused care to patients with bipolar disorder then we need to incorporate structured interventions with proven efficacy. It could be argued that there is an ethical imperative for mental health nurses to provide care that while resource intensive in the short-term, will provide long-term benefits in terms of extended periods of euthymia, improved social and occupational functioning and alleviation of subsyndromal symptoms. The interven-

tions assessed in this review promote self-management and recovery by providing individualized strategies to address the heterogeneity of experiences of bipolar disorder.

Conflicts of interest

None declared.

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