The Society for Clinical Child and Adolescent Psychology (SCCAP):
Initiative for Dissemination of Evidence-based Treatments for Childhood and Adolescent Mental Health Problems

With additional support from Florida International University and The Children’s Trust.
Keynote
Evidence-Based Practices for Bipolar Spectrum Disorders in Youth

Mary Fristad, Ph.D., ABPP
Professor of Psychiatry, Psychology and Nutrition
Director of Research & Psychological Services,
Division of Child & Adolescent Psychiatry
The Ohio State University
Just Because I’m Bipolar

14 Year Old 8th Grader
Former MF-PEP Study Participant

Just because I’m bipolar
  I’m not a freak
  I’m not weird
  I just want to be noticed

Just because I’m bipolar
  I still have feelings
  I still have emotions
  I just have trouble expressing them

Just because I’m bipolar
  I can still be trusted
  I can still be reliable

Just because I’m bipolar—I’m still a normal kid
Evidence-Based Practices for Bipolar Spectrum Disorders (BPSD) in Youth

Mary A. Fristad, PhD, ABPP
Professor, Psychiatry, Psychology & Nutrition
The Ohio State University
Division of Child & Adolescent Psychiatry
Conflict of Interest/Funding

- Dr. Fristad receives royalties from:
  - CFPSI: *MF-PEP and IF-PEP Workbooks*
  - Guilford Press:
    - *Raising a Moody Child: How to Cope with Depression and Bipolar Disorder*
    - *Psychotherapy for Children with Bipolar and Depressive Disorders*
  - APPI:
    - *Clinical Manual for Management of Bipolar Disorder in Children and Adolescents*
    - *Children’s Interview for Psychiatric Syndromes (ChIPS)*
Keynote Goals

- Participants will learn:
  - Rationale for biopsychosocial treatment
  - Summary of evidence-based psychotherapy
  - Resources for families of children with BPSD
Environmental Contributions to Manic Symptoms in Youth

- Not much known—draw on literature from
  - *Adults with BPD*
  - Adolescents with MDD
  - At-risk populations
  - Youth with BPD

- Impact on onset and course
Environmental Effects on Adults with BPD

- **Overview**
- Physical and sexual abuse
- Lack of diagnosis/treatment
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- Social Support
Precipitants of Episodes in Adults with BPD

*Goodwin & Jamison, Manic-Depressive Illness, 2007, Oxford, p. 138*

- Onset of early episodes more likely related to stressful life events (SLE) than onset of later episodes, consistent with kindling hypothesis
- Significantly more SLE before manic episodes
- Work-related SLE—may be particularly important in mania and hypomania
- Cyclothymia is associated with ↑ stress response, consistent w/ it being in the BP spectrum
- Bidirectional: mania often results in SLE
- SLE often lead to
  - sleep loss, which can precipitate mania
  - Alcohol/drug use, which can lead to sleep loss and/or mania
The Role of Psychosocial Stress in the Onset and Progression of Bipolar Disorder and its Comorbidities

Post & Leverich, 2006, Development and Psychopathology, 18: 1181-1211

- Preclinical studies in multiple animal species document the lifelong impact of early life stress (in the pertinent developmental window) on neurochemistry, endocrine responsivity and behavior.

- In humans, early, severe environmental adversity is linked to:
  - Earlier age of onset
  - More serious, complicated, treatment-resistant course (rapid cycling, suicide attempts, longer illness duration, more substance abuse, alcohol abuse, PTSD, more lifetime Axis I disorders, greater symptom severity)
  - Childhood trauma > impairing than trauma in adulthood
  - Leads to increased negative life events in adulthood
Environmental Effects on Adults with BPD

- Overview
- Physical and sexual abuse
- Lack of diagnosis/treatment
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- Social Support
Early Physical and Sexual Abuse Associated with an Adverse Course of Bipolar Illness  


- 651 outpatients with BP-I or BP-II
  - 377 females, 49% abused (36% physical, 43% sexual)
  - 274 males, 36% abused (31% physical, 21% sexual)

- Abuse associated with:
  - Earlier onset
  - More Axis I, II and III dxs
  - Faster cycling
  - Higher rate of suicide attempts
  - More psychosocial stressors occurring before the first and most recent episode
Environmental Effects on Adults with BPD

- Overview
- Physical and sexual abuse
- Lack of diagnosis/treatment
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- Social Support
Early Age of Onset Linked to Longest Delay to Treatment


480 outpts w/ BPD retrospectively rated for onset and prospectively followed for one year.
Environmental Effects on Adults with BPD

- Overview
- Physical and sexual abuse
- Lack of diagnosis/treatment
- **Family climate (expressed emotion)**
- Stressful life events (SLE)
  - measurement issues
- Social Support
Bipolar Disorder and Environmental Stress

Family Expressed Emotion (EE) Predicts Relapse in a 9-Month Follow-Up of Adults w/ Bipolar Disorder

\[ \chi^2(1) = 3.82, \quad P = .05 \]

Environmental Effects on Adults with BPD

- Overview
- Physical and sexual abuse
- Lack of diagnosis/treatment
- Family climate (expressed emotion)
- **Stressful life events (SLE)**
  - measurement issues
- **Social Support**
Effects of Stress and Social Support on Recurrence in Bipolar Disorder


- Prospectively followed 52 adults with BP-I q 3 mos for ≤ 12 mos
- Baseline “total network support score” = perceived SS from best friend, parent and romantic partner
- Depressive recurrence predicted independently by ↑ stress and ↓ social support levels after controlling for duration of illness and medication compliance
- SS did **not** moderate impact of stress
- No differential effect based on source of support
Stressful Life Events (SLE) & BPD in Adults

Johnson & McMurrich, 2006
Development and Psychopathology, 18: 1169-1179

- Family criticism and SLE predict ↑ symptoms and relapse over time Miklowitz & Johnson, 2006
- SLE predict
  - 4-fold ↑ in relapse risk Ellicott et al, 1990
  - 3-fold↑ in time to recovery Johnson & Miller, 1997
- Predict specific symptoms
  - Depressive sxs predicted by:
    - SLE, EE and social support
    - Similar predictors for BPD and UPD
  - Manic sxs predicted by:
    - Schedule-disrupting and goal-attainment life events
Environmental Contributions to Manic Symptoms in Youth

- Not much known—draw on literature from:
  - Adults with BPD
  - *Adolescents with MDD*
  - At-risk populations
  - Youth with BPD

- Impact on **onset** and **course**
Stressful Life Events (SLE) & BPD in Youth

Johnson & McMurrich, 2006
Development and Psychopathology, 18: 1169-1179

- Life stress robustly predicts psychiatric symptoms, especially depression
- Maternal depression linked to ↑ stress reactivity and ↑ stress exposure
- Dependent life events may be particularly linked to mood disorders
Environmental Contributions to Manic Symptoms in Youth

- Not much known—draw on literature from:
  - Adults with BPD
  - Adolescents with MDD
  - At-risk populations
  - Youth with BPD

- Impact on onset and course
Environmental Effects on Youth at High Risk for BPD

- **Parenting**

- Biological impact (pre/perinatal)

- Family climate (expressed emotion)

- Stressful life events (SLE)
  - measurement issues

- Social Support
Early Child-Rearing Practices in Families with a Manic-Depressive Parent


- 7 couples (1 partner with BPD) compared to normal control couples
  - Mothers from BPD couples (were)
    - ↓ attentive to their child’s health needs
    - ↓ active with their child
    - ↑ overprotective, disorganized, unhappy, tense, ineffective
    - Emphasized performance in some achievement-related areas
    - Displayed more negative affect toward the child
  - Index parents
    - ↓ scores for social adjustment and family interaction
    - ↑ situational problems
  - 7 male infants of parents w/ BPD (5/7 families—other parent had UPD)
    - Insecure attachments
    - Problems w/ affect regulation, coping w/ stress
    - Aggressive responses were inappropriate, disproportionate and displaced
    - Difficulty with sharing, role-taking and perspective taking
- Problems persisted 4-5 years later
Environmental Effects on Youth at High Risk for BPD

- Parenting
- **Biological impact (pre/perinatal)**
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- Social Support
Psychiatric Illness in a Clinical Sample of Children with Prenatal Alcohol Exposure


- UCLA Fetal Alcohol and Related Disorders Clinic—referrals d/t heavy *in utero* alcohol exposure
- 23 children aged 5-13, IQ > 70
- FAS, 9%; Partial FAS, 17%; Any FAS, 26%
- Axis I, 87%
- Mood D/O, 61%
  (26%, MDD/ADDM; 35% BPD)
Environmental Effects on Youth at High Risk for BPD

- Parenting
- Biological impact (pre/perinatal)
- *Family climate (expressed emotion)*
- Stressful life events (SLE)
  - measurement issues
- Social Support
Family Environment in Families w/ vs Families w/o Parental Bipolar Disorder


- 24 families w/ ≥ 1 parent w/ BPD vs 27 families with healthy parents (HF)
- Family Environment Scale (FES)
  - ↓ Cohesion, expressiveness (ctrl for SES)
  - 2 prts w/ BPD ↑ cohesion than 1 prt w/ BPD
  - Diagnostic status of children (38% +, 62% -) did not impact FES scores
Family Environment of Children and Adolescents with Bipolar Parents

Chang, Glasey, Ketter & Steiner (2001) Bipolar Disorders, 3:73-78

- 56 children aged 6-18 from 36 families
- Family Environment Scale (FES)
- Compared to norms:
  - ↓ Cohesion and Organization scales
  - ↑ Conflict scale
- Scores did not differ for
  - Families with 1 vs 2 parents w/ a mood d/o
  - Children with or without Axis I (54%) or BP (14%) dxs
Environmental Effects on Youth at High Risk for BPD

- Parenting
- Biological impact (pre/perinatal)
- Family climate (expressed emotion)

*Stressful life events (SLE)*
  - measurement issues

- Social Support
Stressful Life Events (SLE) & Offspring of Parents w/ BPD

Hillegers et al, 2004; Wals et al, 2005

- 140 offspring of 86 parents w/ BPD
- At 5-year follow-up (Hillegers et al, 2004)
  - 38—mood disorder
  - 5—BPD
- Onset clearly related to cumulative severe SLE
- Each event increased risk of future onset by ~10%
- In previous 14 months (Wals et al, 2005)
  - Dependent life events (DLE) predicted episodes
  - After controlling for baseline anx/depr sxs, DLE doubled the risk of onset
Personal & Social Resources in Children of Patients w/ Bipolar Affective Disorder & Children of Normal Control Subjects


- 23 probands from 16 families in which 1 parent had BPD compared to 33 control subjects
  - ≥ 1 lifetime psychiatric d/o: 70%, probands; 45%, controls
  - Assessed **personal resources** (intellectual ability, social problem solving skills, locus of control, self-esteem and self-perceived competence) and **perceived social support** (social network structure and support)
  - ↓ perceived social support associated w/ lifetime psychiatric d/o in both groups
    - No best friend: unique risk for mood d/o
    - Supportive family members: associated with general well being in both groups
    - Reliance on non-kin adults: associated with psychopathology in both groups, esp. probands
Personal resources significantly more frequent for nondisordered probands compared to all other groups—appears to serve as protective factor.
Psychosocial Variables in Children and Teens of Extended Families Identified through Bipolar Affective Disorder Probands

Petti et al (2004), Bipolar Disorders, 6:106-114

- 50 offspring aged 6-17 yrs (aunt/uncle/GP +)
  - 9 mood+ children of mood+ parents, 18%
  - 3 mood+ children of mood- parents, 6%
  - 14 mood- children of mood+ parents, 28%
  - 24 mood- children of mood- parents, 48%

- Mood+ children vs mood- children
  - ↑ supportive classmates, teachers, parents (child report)
  - ↑ discipline, negative life events, dependent negative life events (parent report)
Environmental Contributions to Manic Symptoms in Youth

- Not much known—draw on literature from
  - Adults with BPD
  - Adolescents with MDD
  - At-risk populations
  - **Youth with BPD**

- Impact on **onset** and **course**
Environmental Effects on Youth with BPD

- **Parenting**
- Biological impact (pre/perinatal)
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- Social Support
Parent-Child Interactions
Schenkel, West, Harral, Patel & Pavuluri (2008)
*J Clin Psychol*, 64(4): 422-437

- Compared Parent-Child Relationship Questionnaire
  - 30 youth w/ BPD
  - 30 healthy controls matched for age, sex, SES, race, family structure

- BPD group reported:
  - Less warmth, affection, intimacy
  - More quarreling and forceful punishment

- Problems more pronounced in BPD families with:
  - Elevated sx of mania
  - Comorbid ADHD
  - Earlier illness onset
  - Single parent home
  - Parental mood disorder
  - After controlling for maternal mood, mothers’ perceptions of their relationship with their children were more problematic if the father had a mood disorder

- Cross-sectional study– cannot comment on direction of findings
Psychosocial Risk Factors

_Geller et al, 2000; 2002; 2004_

- At **baseline**, families of youth with BPD, compared to healthy and ADHD control groups:
  - Less warmth
  - Greater tension and hostility
- At 2 and 4 year **follow-up**,
  - Lower maternal warmth predicted faster relapse after recovery from mania
  - Intact families associated with faster rate of recovery
  - Medication status was not predictive of illness course
Environmental Effects on Youth with BPD

- Parenting
- Biological impact (pre/perinatal)
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- Social Support
Biological Risk Factors in Pediatric Bipolar Disorder


- 98 children aged 5-18
  - 37 with BP-I
  - 33 with BP-I + ADHD
  - 28 healthy controls

- Tested (controlling for age and sex)
  BPD = 1st ° relative w/ BPD + head injury + serious physical illness + perinatal risk + developmental delay

- **Family hx** 15X higher in BPD group

- Each **perinatal risk** factor increased risk 6-fold
Environmental Effects on Youth with BPD

- Parenting
- Biological impact (pre/perinatal)
- *Family climate (expressed emotion)*
- Stressful life events (SLE)
  - measurement issues
- Social Support
Expressed Emotion Attitudes in Parents of Adolescents w/ BPD

Coville, Miklowitz, Taylor & Low, 2008

*J Clin Psychol*, 64(4): 438-449

- N=44 adolescents with BPD
- Parents more critical of girls than boys
- Adolescent (vs child) onset associated w/
  - the *most* criticism for girls
  - the *least* criticism for boys
Expressed Emotion & Course of Illness in Adolescents w/ BPD

Miklowitz, Biukians & Richards, 2006
Development and Psychopathology, 18: 1247-1265

- Family-focused treatment (FFT) for 20 adolescents w/ BPD
- Camberwell Family Interview
  - 74% High EE; 26% Low EE
- Adolescents in High EE families had
  - higher mood sxss throughout the 24 months
    - Depression scores, \( p = .027 \)
    - Mania scores, \( p = .08 \)
  - higher problem behaviors in the first year of treatment—the gap narrowed by the second year
    - Internalizing \( t, p = .019 \)
    - Externalizing \( t, p = .095 \)
Does Expressed Emotion Predict Mood Symptom Scores Over 2 Years Among Adolescent Bipolar Patients (N=20)?

(Miklowitz et al., 2006; Dev and Psychopathology)

\[ F(1, 17) = 6.33, \ p = .02; \ \text{Cohen's} \ d = 0.98 \]
Family Conflict Moderates Medication Response in Youth w/ BPD


- N=55 youth aged 5-17 on Li or DPX for 8 wks
- Family Assessment Device (FAD, M score=1-4)
  - General Functioning Scale (GF, 12 items)
  - Problem-Solving Scale (PS, 6 items)
  - Communication Scale (CM, 9 items)
- Tested what variables predict End-of-Week 8 scores
  - MRS: only baseline MRS was significant predictor
  - CDRS-R: after controlling for baseline CDRS-R, FAD-PS accounted for 10% of variance
  - Each ↑1 pt on the FAD-PS → ↑5 pts on the CDRS-R
  - Power to detect FAD-CM impact was .63 (r=.26, p=.053)
Environmental Effects on Youth with BPD

- Parenting
- Biological impact (pre/perinatal)
- Family climate (expressed emotion)
- **Stressful life events (SLE)**
  - measurement issues
- Social Support
Stressful Life Events in Youth with BPD


- Compared total, dependent, independent and uncertain life events in youth with prepubertal and early adolescent bipolar disorder (PEA-BD, n=93), ADHD (n=81) and normal controls (n=94)

- PEA-BD > ADHD > NC
Environmental Effects on Youth with BPD

- Parenting
- Biological impact (pre/perinatal)
- Family climate (expressed emotion)
- Stressful life events (SLE)
  - measurement issues
- **Social Support**
Life Stress and Course of Early Onset BPD


- 38 adolescents with BPD
- UCLA Life Stress Interview q 3 mos
  - 45 min structured interview
  - Assesses episodic and chronic stress
    - Chronic: romantic relationships, close friendships, social activities, family relationships, school performance, physical health, health of family members; Level rated from 1 (highly positive) to 5 (highly negative)
    - Episodic: impact rated from 1 (none) to 5 (extremely severe); dependence rated from 1 (completely independent) to 5 (completely dependent)
  - Distinguishes between subjective reactions and objective evaluations of stress
Chronic Stress in Relationships

*Kim, Miklowitz, Biuckians & Mullen, 2007*

- ↑ chronic stress
  - in family and romantic relationships-- linked with ↑ sustained depressive symptoms
  - in peer relationships-- linked with ↑ sustained manic symptoms
- Dependent events were more closely related to symptoms in younger vs older youth
Chronic stress in family relationships as a predictor of depression and mania symptoms.

Kim, Miklowitz, Biuckians, & Mullen, 2007
Summary

- Genetics are #1—etiology
- Environmental effects are #2—onset & course
  - Bidirectional
  - Problems beget problems
  - Critical periods of vulnerability
- Broad support for the impact of:
  - Family environment
  - Parenting
  - Stressful life events, esp. abuse
  - Social support
  - Biological parameters
- Suggests need for comprehensive, biopsychosocial treatment
Proposed Solutions and Future Research Directions

Carlson et al, 2009, J Ch Adol Psychopharm

- Increase awareness of the public, mental health providers, and funding agencies that, despite the high heritability of BPD, psychosocial variables also affect illness onset and course.

- Studies of BPD should collect high quality psychosocial data.

- Multiple types of measures should be used to assess a wide variety of psychosocial variables, including perinatal factors.
Keynote Goals

- Participants will learn:
  - Rationale for biopsychosocial treatment
  - *Summary of evidence-based psychotherapy*
  - Resources for families of children with BPSD
Empirically Supported Psychosocial Adjunctive Treatments for Childhood Bipolar Disorder

- Fristad, Goldberg-Arnold & Gavazzi, 1999
  *Bipolar Disorders*
  - None
Current Psychotherapies for Youth with Bipolar Disorder

- CBT/Family Systems Based
  - Pavuluri/West—RAINBOW program
  - Miklowitz-FFT-A
  - PEP (MF-PEP, IF-PEP)
- DBT—T. Goldstein
- IP-SRT—Hlastala
Youth w/ BD  Pavuluri et al, 2004, JAACAP

Pre-Post CGI-BP Severity Scale

Overall Mania Depression Psychosis Aggression ADHD Sleep

*p values < 0.0001 except psychosis *p < 0.01

*N=34, aged 5-18, nonrandomized trial, RAINBOW + med algorithm vs TAU

Translation to Practice...Psychosocial treatment may help to alleviate symptoms and improve functioning. It is likely an important ingredient of treatment model.
Maintenance: CGI-BP Overall Scores at Year 1, 2 and 3 in Reference to Post-treatment, *West, Henry & Pavuluri, 2007, JAACAP*

Translation to Clinical Practice….Maintenance therapy may help patients remain engaged in treatment and sustain initial treatment effects.
Translation to Clinical Practice....Group psychotherapy may help alleviate symptoms, improve children’s psychosocial functioning, and increase parent’s knowledge and efficacy around disorder.

CMRS = Child Mania Rating Scale; CDI = Children’s Depression Inventory; SDQ = Strengths and Difficulties Questionaire; PSS = Parenting Stress Scale; TOPS = Therapy Outcomes Parent Scale
Psychoeducation: Adults w/ BPD
Miklowitz et al, Arch Gen Psychiat 2003

- Colorado study, $N=101$
  - Delays relapse: 74 vs 53 weeks
  - Reduces mood symptoms: gain begins at 6 mos, continue through 24 mos
Adults—BPD \textit{Rea et al, JCCP, 2003}

- UCLA study, $N=53$: delays rehospitalization
Adolescents w/ BPD
Miklowitz et al, J Aff Disorders, 2004

- $N=20$, open trial
- Improved mood and behavior following treatment—ratings every 3 mos (0-12)
  - K-SADS Depression, 2.1 → 1.7
  - K-SADS Mania, 2.4 → 1.8
  - CBCL Behavior Problems, 86 → 46
- Randomized trial underway
### DBT for Adolescents with Bipolar Disorder: Open Pilot Study Demographics

**Tina Goldstein et al, 2007, JAACAP**

<table>
<thead>
<tr>
<th></th>
<th>DBT (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (SD)</strong></td>
<td>15.8 (1.5)</td>
</tr>
<tr>
<td>Range 14-18</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8 (80%)</td>
</tr>
<tr>
<td>Male</td>
<td>2 (20%)</td>
</tr>
<tr>
<td><strong>Bipolar Diagnosis</strong></td>
<td></td>
</tr>
<tr>
<td>Bipolar I</td>
<td>7 (70%)</td>
</tr>
<tr>
<td>Bipolar II</td>
<td>2 (20%)</td>
</tr>
<tr>
<td>Bipolar NOS</td>
<td>1 (10%)</td>
</tr>
<tr>
<td><strong># Past Hospitalizations (SD)</strong></td>
<td>2.2 (2.2)</td>
</tr>
<tr>
<td><strong># Past Suicide Attempts (SD)</strong></td>
<td>1.4 (1.3)</td>
</tr>
<tr>
<td><strong>Age of Illness Onset (SD)</strong></td>
<td>13.2 (1.7)</td>
</tr>
</tbody>
</table>
DBT Open Pilot Study
Emotional Dysregulation Improves Over 1 Year of DBT Treatment

Pre/post paired $t = 3.0, p = .02$
Childhood Affective Lability Scale (CALS)
Goldstein et al., 2007
DBT Open Pilot Study

Suicidality Decreases Over 1 Year of DBT Treatment

Mean MSSI Score over Follow-Up Timepoint (Months):

- Intake: 6.7
- 3 months: 6.1
- 6 months: 2.2
- 9 months: 0
- 12 months: 0

Pre/post paired $t = 2.5$, $p = .04$, Cohen's $d = 1.2$

Modified Scale for Suicidal Ideation (MSSI)
Goldstein et al., 2007
DBT Open Pilot Study

Additional Domains of Improvement with 1 year of DBT Treatment

- Hospitalizations
- Depressive symptoms
- Non-suicidal self-injurious behavior
- Over 90% of scheduled sessions attended

Goldstein et al., 2007
DBT Open Pilot Study
High Post-DBT Treatment Satisfaction Ratings

Goldstein et al., 2007
DBT for Adolescents with BP: Open Pilot Study II

T Goldstein et al, in preparation

- Manualized treatment
- DBT Consultation Team
- Assessment of Axis II pathology
- Behavioral and psychophysiological assessment of emotional dysregulation
**DBT for Adolescents with Bipolar Disorder: Open Pilot Study II**  
*Goldstein et al, in preparation*

<table>
<thead>
<tr>
<th></th>
<th>DBT (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (SD)</strong></td>
<td>16.1 (2.1)</td>
</tr>
<tr>
<td><strong>Range 13-18</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>8 (80%)</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>2 (20%)</td>
</tr>
<tr>
<td><strong>Bipolar I</strong></td>
<td>4 (40%)</td>
</tr>
<tr>
<td><strong>Bipolar II</strong></td>
<td>2 (20%)</td>
</tr>
<tr>
<td><strong>Bipolar NOS</strong></td>
<td>4 (40%)</td>
</tr>
<tr>
<td><strong># Past Hospitalizations (SD)</strong></td>
<td>1.6 (3.0)</td>
</tr>
<tr>
<td><strong># Past Suicide Attempts (SD)</strong></td>
<td>1.1 (1.0)</td>
</tr>
<tr>
<td><strong>Age of Illness Onset (SD)</strong></td>
<td>12.3 (3.9)</td>
</tr>
</tbody>
</table>
DBT Open Pilot Study II
Treatment Attendance (n=10)

Goldstein et al., in preparation
DBT Open Pilot Study II
Suicidal Ideation Decreases Over 1 Year of DBT Treatment

Adolescent Longitudinal Interval Follow-Up Examination
Weekly Suicidal Ideation Ratings (A-LIFE; Keller et al., 1987)
Goldstein et al., in preparation
DBT Open Pilot Study II
Suicidality Decreases Over 1 Year of DBT Treatment

Pre/post paired \( t = 3.9, p < .05 \)
Suicidal Ideation Questionnaire-Jr (SIQ-Jr)
Goldstein et al., in preparation
DBT Open Pilot Study II
Depression Improves Over 1 Year of DBT Treatment

A-LIFE Psychiatric Status Ratings (PSR)
Goldstein et al., in preparation
DBT Open Pilot Study II
Emotional Dysregulation Improves Over 1 Year of DBT Treatment

Pre/post paired $t = 4.3; p = .02$
Childhood Affective Lability Scale (CALS)
Goldstein et al., in preparation
DBT Open Pilot Study II

% Time Well Increases Over 1 Year of DBT Treatment

A-LIFE Psychiatric Status Ratings (PSR)
Goldstein et al., in preparation
Interpersonal & Social Rhythm Therapy-Adolescents (IPSRT-A)

_Hlastala et al, 2010, Depression & Anxiety_

- N=12, adolescents, BPSD
- 16-18 session adjunctive tx over 20 wks
- 11/12 completed tx, 97% sessions attended
- Significant ↓ in manic, depressive and general psychiatric symptoms; ↑ in global functioning
- Effect sizes: medium-large to large
The OSU Psychoeducation Program

- Orientation
  - Nonblaming/growth-oriented
  - Biopsychosocial—uses systems and cognitive-behavioral techniques

- Education + Support + Skill Building → Better Understanding → Better Treatment + Less Family Conflict → Better Outcome

- Three formats
  - Multi-family psychoeducational psychotherapy (MF-PEP)
  - Individual family psychoeducational psychotherapy (PEP)
  - workshops
ODMH Study

Fristad, Goldberg-Arnold & Gavazzi, JMFT, 2003

- 35 children and their parents
  - 54% depressive; 46% bipolar disorders
  - M=3.6 comorbid diagnoses/child (range, 1-7)
  - C-GAS=51 at baseline
  - 29/35 (83%) on meds
  - 8-11 years old (average, 10.1 yrs)
  - 77% boys

- 6 month wait-list design
- 6 sessions, 75 minutes/session, manual-driven treatment
ODMH Findings

Fristad, Goldberg-Arnold & Gavazzi, JMFT, 2003

Parents

- *Increased* knowledge of mood disorders
- *Increased* positive family interactions
- *Increased* efficacy in seeking treatment
- *Improved* coping skills
- *Increased* social support
- *Improved* attitude toward child/treatment

Children

- *Increased* social support from parents
- *Increased* social support from peers (trend)
Multi-Family Psychoeducational Psychotherapy (MF-PEP)

Fristad, Verducci, Walters & Young (2009) Arch Gen Psych, 66(9): 1013-1021

- Children aged 8-11 (any mood disorder)
- 8 sessions, 90 minutes each
  - Begin/end with parents/children together
  - Middle (largest) portion-separate groups
- Children receive *in vivo* social skills training (in gym) after formal “lesson” is completed
- Therapists: 1-parents; 2-children
- Families receive projects to do between sessions
8 Session Outline--Parents

1. Welcome, symptoms & disorders
2. Medications
3. "Systems": school/treatment team
4. Negative family cycle, WRAP-UP 1st ½
5. Problem solving
6. Communication
7. Symptom management
8. WRAP-UP 2nd ½ of program & graduate
8 Session Outline--Children

1. Welcome, symptoms & disorders
2. Medications
3. “Tool kit” to manage emotions
4. Connection between thoughts, feelings and actions (responsibility/choices)
5. Problem solving
6. Nonverbal communication
7. Verbal communication
8. Review & GRADUATE!
Many Contributors...

- **Parent Group Therapists**
  - Jill S. Goldberg-Arnold, PhD*
  - Catherine Malkin, PhD
  - Kitty W. Soldano, PhD, LISW

- **Child Group Therapists**
  - Barb Mackinaw-Koons, PhD
  - Nicholas Lofthouse, PhD
  - Colleen Quinn, MS
  - Jarrod Leffler, PhD

- **Graduate Student Interviewers/Co-Therapists/Lab Members**
  - Kate Davies Smith, PhD
  - Kristen Holderle Davidson, PhD
  - Dory Phillips Sisson, PhD
  - Nicole Klaus, MA
  - Jenny Nielsen, MA
  - Matthew Young, BA
  - Ben Fields, MEd
  - Colleen Cummings, BA
  - Radha Nadkarni-DeAngelis, BA

- **Data Analysis/Management**
  - Joseph S. Verducci, PhD
  - Cheryl Dingus, MS
  - Kimberly Walters, MS
  - Elizabeth Scheer, BS
  - Hillary Stewart, BA
  - Christina Theodore-Oklata, BA

- **693 Students**
- **Graduate Student Interviewers/Co-Therapists**
  - Kristy Harai, PhD
  - Anya Ho, PhD
  - Rita Kahng, MA
  - Becky Hazen, PhD
  - Kari Jibotian, MA
  - Lauren Ayr, MA

- **165 Families**

*Consensus Conference Reviewer
MF-PEP Recruitment—N=165

- 225 families screened
- 203 (90%) passed the screen
- 171 (84%) arrived at baseline assessment
- 165 (96%) met study criteria

Referral sources:
- 62% health care providers
- 19% media
- 19% other

Rural/geographically remote, 22%
(round trip, 56±64 mi; range=2-344 mi)
## Study Sample - Family Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>MF-PEP+TAU (n=78)</th>
<th>WLC+TAU (n=87)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married bio par</td>
<td>46%</td>
<td>40%</td>
</tr>
<tr>
<td>Step-family</td>
<td>17%</td>
<td>23%</td>
</tr>
<tr>
<td>Married adop par</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Single bio par</td>
<td>21%</td>
<td>17%</td>
</tr>
<tr>
<td>Single adop par</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Income</td>
<td>&lt;20K to &gt;100K</td>
<td>&lt;20K to &gt;100K</td>
</tr>
<tr>
<td></td>
<td>M=40-59K</td>
<td>M=40-59K</td>
</tr>
</tbody>
</table>
## Demographics: MF-PEP Total Sample & BPD Sub-Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>TOTAL N=165</th>
<th>BPD N=115</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comorbid D/O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>67%</td>
<td>70%</td>
</tr>
<tr>
<td>Behavior</td>
<td>97%</td>
<td>95%</td>
</tr>
<tr>
<td>ADHD</td>
<td>87%</td>
<td>80%</td>
</tr>
<tr>
<td>Two-parent families</td>
<td>74%</td>
<td>65%</td>
</tr>
<tr>
<td>(includes step-families)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average round trip</td>
<td>56 mi (range: 2-344)</td>
<td>70 mi (range: 14-344)</td>
</tr>
</tbody>
</table>
## Demographics—Various Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>BPD-ITT n=115</th>
<th>Treated BPD n=89</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>9.8</td>
<td>9.7</td>
</tr>
<tr>
<td>% Male</td>
<td>72</td>
<td>69</td>
</tr>
<tr>
<td>% White</td>
<td>91</td>
<td>94</td>
</tr>
<tr>
<td>% Fam Hx-Mania</td>
<td>53</td>
<td>55</td>
</tr>
<tr>
<td>% Fam Hx-Depression</td>
<td>73</td>
<td>72</td>
</tr>
<tr>
<td>% Fam Hx-Either</td>
<td>84</td>
<td>83</td>
</tr>
</tbody>
</table>
## NIMH Study Design, N=165

<table>
<thead>
<tr>
<th>Group</th>
<th>Time 1 Month 0</th>
<th>Time 2 Month 6</th>
<th>Time 3 Month 12</th>
<th>Time 4 Month 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF-PEP + TAU</td>
<td>Baseline: Pre-treatment</td>
<td>Follow-up</td>
<td>Follow-up</td>
<td>Follow-up</td>
</tr>
<tr>
<td>WLC + TAU</td>
<td>Baseline</td>
<td>Follow-up</td>
<td>Pre-treatment</td>
<td>Follow-up</td>
</tr>
</tbody>
</table>

*aFamilies were enrolled in 11 sets of 15 (7-MFPG/8-WLC) = 165 families*

*bMulti-Family Psychoeducational Psychotherapy + Treatment As Usual*

*cWait-List Control + Treatment As Usual*
**Outcome Measure**

- MSI = Mood Severity Index
  - CDRS-R + MRS (equal contributions)
  - <10: minimal symptoms
  - 11-20: mild symptoms
  - 21-35: moderate symptoms
  - >35: severe symptoms
Mood Severity Index (Parent, Current)  
MF-PEP BPD Sample

- N=115, all BPD
  - n=55 Immediate
  - n=60 Wait List
- Linear Mixed Effects Modeling
  - $X^2=6.19$, $p<.02$
  - Slope difference = -7.76/12 mos
- Pre-post Imm=WLC
Mood Severity Index (Parent, Current)  
MF-PEP  Treated BPD Sample

- N=89
  - n=54 Immediate
  - n=35 Wait List
- Linear Mixed Effects Modeling
  - $X^2=5.91, \ p<.02$
  - Slope difference $=-7.96/12 \ mos$
- Pre-Post Imm=WLC
Impact of MFPG on Service Utilization & Mood Severity

*Mendenhall, Fristad & Early, 2009, J Cons Clin Psychol*

- Parental attitudes toward treatment changes with MF-PEP; impacts quality of services sought

- Improved quality of services leads to better mental health outcomes

- MF-PEP appears to improve quality of services utilized & child’s mood severity over time as designed to do. It helps parents become better consumers.
Anecdotal Evaluations--Parents

- No matter how bad the situation is...there is hope and treatment. Don’t give up. This program was an eye opener for me. I also was encouraged and relieved to find out that I was not alone.

- Listen to what they are saying. They can really help you. Learn what is going on with your child. Stay focused on what is going with your child and do not give up on your child.
Anecdotal Evaluations--Children

- You get to meet new people you never knew before. They help you with your symptoms.
- They’re nice and they’re helpful. And you guys support us and give us snacks. You’ve been nice to us and treated us with respect.
- It really helps out if you let it.
Individual-Family Psychoeducation (IF-PEP)  
*OH Dept Mental Health, 2002-2004*

- N=20
- 16 sessions
  - Alternate child and parent with parent
  - Same content + Healthy Habits
    - diet, exercise, sleep
- Comparable design to MFPG
IF-PEP Primary Outcome: MSI-Parent-Cur—Power Analyses

<table>
<thead>
<tr>
<th>Variable</th>
<th>N per Condition</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSI-Parent-CUR T1-T2</td>
<td>64</td>
<td>.45</td>
</tr>
<tr>
<td>MSI-Parent-CUR T1-T3</td>
<td>36</td>
<td>.60</td>
</tr>
</tbody>
</table>
IF-PEP: Parent Evaluations

- Anonymous evaluations completed after treatment
- Parents report (1-5 rating, overall 1.6)
  - ↑ knowledge re: symptoms, medication, accessing treatment
  - ↑ skills re: working with schools and treatment team, managing symptoms at home
  - Feeling supported/not blamed
IF-PEP: Children’s Evaluations

- 1-5 Rating Scale
  - Overall rating, 1.7
  - Item Range:  1.3 (therapist) to 2.2 (learned about medications)
- ↑ knowledge re: mood symptoms, medication
- ↑ ability to get along with family, friends and at school
- ↑ skill re: symptom management
- ↑ support/ ↓ isolated, “not the only one”
- parents’ behavior toward them better
IF-PEP 24: Two Case Studies
Leffler, Fristad & Klaus, 2010, J Fam Psychotherapy

- Expanded from 16 to 24 sessions
  - 1 sibling session
  - 1 additional systems-of-care (school, mental health) session
  - 1 school professionals session (face-to-face or conference call attendance)
  - 2 Healthy Habits sessions
  - 3 additional “in-the-bank” sessions
IF-PEP 24: Case Studies
Leffler, Fristad & Klaus, 2010, J Fam Psychotherapy

- 11 yr old girl “Jane”
- Long treatment history
  - sertraline, 3 mos: akathesia, elevated mood, dangerous behaviors
  - divalproex sodium, clonidine, quetiapine, ages 9-11: no significant improvement
  - fluvoxamine and clonazapam: for compulsive behavior and agitation
- School and private therapeutic support
IF-PEP 24: Case Studies

Leffler, Fristad & Klaus, 2010

- 10 yr old boy “John”
- Extensive treatment history
  - 2 yrs, divalproex sodium (trial of methylphenidate)
  - 4 yrs, risperidone
  - 6 yrs, atomoxetine
  - 8 yrs, trials of methylphenidate, amphetamine/dextroamphetamine, clonidine, lithium, and aripiprazole
  - 9 yrs, trials of quetiapine and escitalopram
  - 10 yrs, oxcarbazepine
  - Very significant weight gain
  - Extensive psychotherapy history
Jane’s Diagnoses
Leffler, Fristad & Klaus, 2010

- BP-1: Most Recent Episode Mixed: current moderate to severe symptoms: dysphoric mood, irritability, psychomotor agitation, increased appetite, strong craving for sweets, weight gain, rejection sensitivity, irritability, motor hyperactivity, derailment, mood lability
- ADHD-Combined
- ODD
- GAD
- OCD
John’s Diagnoses
Leffler, Fristad & Klaus, 2010

- BP-1 Most Recent Episode Hypomanic:
  - current mild symptoms: irritability, negative self-image, elevated mood, uninhibited people seeking, hypersexuality
- ADHD-combined
- ODD
- Specific Phobia-dark & heights
- SAD
## Jane’s Treatment Response

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre</th>
<th>Post</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-GAS: Current</td>
<td>36</td>
<td>48</td>
<td>Improved</td>
</tr>
<tr>
<td>C-GAS: Worst</td>
<td>31</td>
<td>41</td>
<td>Improved</td>
</tr>
<tr>
<td>KMRS</td>
<td>45</td>
<td>28</td>
<td>Improved</td>
</tr>
<tr>
<td>KDRS</td>
<td>67</td>
<td>55</td>
<td>Improved</td>
</tr>
<tr>
<td>TBQ-P</td>
<td>3.9</td>
<td>4.2</td>
<td>Improved</td>
</tr>
</tbody>
</table>
John’s Treatment Response

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre</th>
<th>Post</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-GAS: Current</td>
<td>35</td>
<td>40</td>
<td>Improved</td>
</tr>
<tr>
<td>C-GAS: Worst</td>
<td>15</td>
<td>38</td>
<td>Improved</td>
</tr>
<tr>
<td>KMRS</td>
<td>48</td>
<td>28</td>
<td>Improved</td>
</tr>
<tr>
<td>KDRS</td>
<td>43</td>
<td>55</td>
<td>Worsened</td>
</tr>
<tr>
<td>TBQ-P</td>
<td>3.3</td>
<td>4.2</td>
<td>Improved</td>
</tr>
</tbody>
</table>
Keynote Goals

- Participants will learn:
  - Rationale for biopsychosocial treatment
  - Summary of evidence-based psychotherapy
  - Resources for families of children with BPSD
OATS-Depression, 2011-2014, NIMH R34

- OATS=Omega3 and Therapy Study
- Kayden Healy, 614-293-4908
- N=60
- 12 week trial
- 8-14 years
- MDD, dysthymic d/o, D-NOS
- No meds/psychotherapy in previous month except stable stimulants, sleeping aids

<table>
<thead>
<tr>
<th></th>
<th>Omega3</th>
<th>Placebo</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-PEP</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Active Monitoring</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30</strong></td>
<td><strong>30</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>
OATS-Bipolar, 2011-2014, NIMH R34

- **OATS=Omega3 and Therapy Study**
- **Kayden Healy, 614-293-4908**
- **N=60**
- **12 week trial**
- **8-14 years**
- **BP-NOS, cyclothymic disorder**
- **No meds/psychotherapy in previous month except stable stimulants, sleeping aids**

<table>
<thead>
<tr>
<th></th>
<th>Omega3</th>
<th>Placebo</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-PEP</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Active Monitoring</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
</tbody>
</table>
Books for Children

- Brandon & the Bipolar Bear -- T. Anglada
- My Bipolar, Roller Coaster, Feelings Book & Workbook—B. Hebert
- Kid Power Tactics for Dealing with Depression -- N. & S. Dubuque
- Matt, The Moody Hermit Crab -- C. McGee
- Anger Mountain—B. Hebert
Books for Adolescents

- Recovering from Depression: A Workbook for Teens -- M. E. Copeland & S. Copans
- Conquering the Beast Within: How I Fought Depression & Won...& How You Can, Too -- C. Irwin
- Mind Race: A Firsthand Account of One Teenager's Experience with Bipolar Disorder -- P.E. Jamieson & M.A. Rynn
Children’s Literature

- **The Phoenix Dance**
  - Dia Calhoun, award winning author
  - Farrar, Straus & Giroux, NY, 2005
  - Based on the Grimms’ Twelve Dancing Princesses
  - Explores the experience of bipolar disorder in an adolescent girl
Books for Parents

- Raising a Moody Child: How to Cope with Depression and Bipolar Disorder — *M.A. Fristad & J.S. Goldberg-Arnold*
- New Hope for Children & Teens with Bipolar Disorder—*B. Birmaher*
- The Childhood Bipolar Disorder Answer Book—*T. Anglada & S.M. Hakala*
- The Bipolar Child — *D. & J. Papalos*
- A Parent's Survival Guide to Childhood Depression — *S. Dubuque*
Books for Adults

- Out of the Darkened Room: Protecting the Children and Strengthening the Family When a Parent is Depressed -- W. Beardslee
- Living Without Depression & Manic Depression -- M. E. Copeland
- An Unquiet Mind -- K. Redfield Jamison
- Thoughts & Feelings: Taking Control of Your Moods & Your Life -- M. McKay, M. Davis & P. Fannin
- The Bipolar Survival Guide: What You and Your Family Need to Know -- D.J. Miklowitz
- Winter Blues: Seasonal Affective Disorder- What it is and How to Overcome it -- N.E. Rosenthal
More Books to Read

- **General Parenting**
  - How to Talk So Kids Will Listen & Listen So Kids Will Talk -- *Faber & Mazlish*
  - The Explosive Child -- *R. Greene*
  - The Optimistic Child -- *M. Seligman*

- **Sibling Issues**
  - Siblings Without Rivalry -- *A. Faber & E. Mazlish*
  - Turbo Max: A Story For Siblings of Bipolar Children -- *T. Anglada*

- **Understanding Psychiatric Disorders**
  - It's Nobody's Fault -- *H. Koplewicz*

- **Understanding Psychiatric Medications**
  - Straight Talk About Psychiatric Medications for Kids --- *T. Wilens*

- **Miscellaneous**
  - I Am Not Sick, I Don’t Need a Help! -- *X. Amador & A.L Johanson*
  - The Thyroid Sourcebook -- *M.S. Rosenthal*
Educational Websites

- Information re: BPD for Parents, Children and Educators
  - [www.bpchildren.com](http://www.bpchildren.com)
  - [www.schoolbehavior.com](http://www.schoolbehavior.com)
  - [www.bpkids.org](http://www.bpkids.org)
  - [www.josselyn.org/Store.htm](http://www.josselyn.org/Store.htm)

- Special Education Advocacy -- [www.wrightslaw.com](http://www.wrightslaw.com)

- National Association of Therapeutic Schools and Programs—[www.natsap.org](http://www.natsap.org)

- Internet Special Education Resources (ISER)
**Groups/Websites – Adults, Families & Children**

- **National Alliance on Mental Illness (NAMI)**
  - 1-800-950-6264  [www.nami.org](http://www.nami.org)
- **Mental Health America (NMHA)**
  - 1-703-684-7722  [www.nmha.org](http://www.nmha.org)
- **Depressive & Bipolar Support Alliance (DBSA)**
  - 1-800-826-3632  [www.dbsalliance.org](http://www.dbsalliance.org)
- **Families for Depression Awareness (FFDA)**
  - 1-718-890-0220  [www.familyaware.org](http://www.familyaware.org)
- **Child & Adolescent Bipolar Foundation (CABF)**
  - 1-847-492-8519,  [www.bpkids.org](http://www.bpkids.org)
- **Juvenile Bipolar Research Foundation (JBRF)**
  - 1-866-333-5273,  [www.bpchildresearch.org](http://www.bpchildresearch.org)
- **BP Children**
  - 1-732-909-9050 (fax)  [www.bpchildren.com](http://www.bpchildren.com)
Additional Resources

- **Light Therapy:**
  - Center for Environmental Therapeutics
    - [www.cet.org](http://www.cet.org)

- **Nutritional Intervention:**
  - EMpower Plus
    - 1-888-878-3467 [www.truehope.com](http://www.truehope.com)
  - Omega-Brite
    - 1-800 383 2030 [www.omegabrite.com](http://www.omegabrite.com)

- **Evidence-Based Treatments:**
  - [www.effectivechildtherapy.com](http://www.effectivechildtherapy.com)
  - PEP Workbooks
    - [www.moodychildtherapy.com](http://www.moodychildtherapy.com)
PEP & MF-PEP Resources

Books & DVD for parents or therapists—order from www.amazon.com

Home Study Course—for professionals
Taped 2 day seminar by Dr. Fristad
6 or 12 hours Continuing Education credit
$95 for CD or cassette
$65 for test scoring/reporting
www.jkseminars.com

Treatment Manual—2011, Guilford Press
**************
www.moodychildtherapy.com
Child, Parent & Child Therapist
MF-PEP Workbooks
Child & Parent PEP Workbooks
For more information, please go to the main website and browse for workshops on this topic or check out our additional resources.

**Additional Resources**

**Online resources:**
2. Psychoeducational Psychotherapy: www.moodychildtherapy.com

**Books:**

**Selected Peer-reviewed Journal Articles:**
Full Reference List

Keynote: Evidence-Based Practices for Bipolar Spectrum Disorders in Youth

Websites:
1. Psychoeducational Psychotherapy: www.moodychildtherapy.com

Books:

Peer Reviewed Journal Articles:


Petti, T., Reich, W., Todd R.D. et al. (2004), Psychosocial variables in children and teens of extended families identified through bipolar affective disorder probands. *Bipolar Disorders, 6*, 106-114


