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

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Keynote
Evidence-based Treatment of Depression in Adolescents

John F. Curry, Ph.D., ABPP
Professor; Director of Clinical Psychology
Psychiatry & Behavioral Sciences, School of Medicine
Duke University Medical Center
Major Depression: One of the Mood Disorders in DSM-IV

- **Depressive Disorders**
  1. Major Depressive Disorder
  2. Dysthymic Disorder
  3. Depressive Disorder NOS

- **Bipolar disorders**
  1. Bipolar I Disorder (Manic-Depression)
  2. Bipolar II Disorder (Hypomanic-Major Depression)
  3. Cyclothymic Disorder (Hypomanic-Minor Depression)
**Symptoms of MDD**

- Five or more of the following, for at least 2 weeks:
  - Depressed or irritable mood*
  - Loss of interest or pleasure*
  - Appetite or weight gain or loss
  - Insomnia or hypersomnia
  - Psychomotor agitation or retardation

[* one of these must be present]
Symptoms of MDD (continued)

- Fatigue or loss of energy
- Excessive guilt or worthlessness
- Diminished ability to think, concentrate, decide
- Recurrent thoughts of death, recurrent suicidal ideation, or a suicide attempt or plan

- MDD, or “Any Depression”
- Meta-analysis of 26 studies

- Prevalence under age 13: 2.8%
- Prevalence for girls, ages 13-18: 5.9%
- Prevalence for boys, ages 13-18: 4.6%
Duration of Episodes

- Kovacs (1996):  
  (Clinic) child MDD: median duration = 9 months  
  Recurrence in 3 years: 54%

- Lewinsohn et al. (1993)  
  (Community) adolescent MDD: mean duration = 6.5 mos. Median duration = 2 months  
  Recurrence in 4 years: About 33%
Risk for Adult Depression

- Harrington et al. (1990)

  18-year-follow-up of child psychiatry outpatients

  Adult depression 4 times more likely in depressed children than in other child outpatients
Common Co-morbid Disorders

- Anxiety: most often precedes depression
- Conduct disorder: usually precedes depression, but in some cases follows depression
- Substance use disorder: may precede or follow

- MDD with CD or SUD raises risk of suicide attempts or completions during late adolescence or adulthood

- Any co-morbid disorder complicates treatment of MDD
What is Known About…

- Evidence-Based Practices
  
  What psychotherapies?
  What combined treatments?
  What kinds of evidence?

- This review will not include evidence-based medication interventions
What Psychotherapies?

- Established Psychotherapies:
  - Interpersonal Psychotherapy
  - Cognitive Behavior Therapy

- Established Combined Treatment:
  - CBT + fluoxetine

- Promising Innovative Therapy:
  - Attachment-Based Family Therapy
Attachment-Based Family Therapy; Diamond et al, 2002

- Repairing the adolescent-parent attachment will alleviate the depression
- 32 adolescents with MDD (78% female; 69% African-American)
- Randomized to 12-weeks of ABFT or 6-week waitlist
- Outcome: 81% of ABFT versus 47% waitlist no longer met MDD criteria
ABFT for Adolescent Suicidal Ideation

Diamond et al., 2010

- 66 adolescents identified in primary care or emergency settings (70% African-American)
- Randomized to 3 months of ABFT or enhanced usual care (all had weekly monitoring and access to 24-hour crisis phone)
- ABFT > EUC on rate of change in suicidal ideation, recovery from suicidal ideation, and change in depressive symptoms
Interpersonal Psychotherapy for Adolescent Depression: IPT-A

Efficacy and Effectiveness
Interpersonal Theory

- Whatever the causes of depression, it is maintained by problems in interpersonal relationships
- Loss or Grief
- Role Transition
- Interpersonal Role Disputes
- Interpersonal Deficits
Interpersonal therapists

- Conduct a diagnostic assessment, as well as an interpersonal inventory
- Select a single focus for treatment:
  - Grief/loss
  - Role transition
  - Role dispute
  - Interpersonal deficit
- Encourage emotional expression, exploration, problem-solving, and resolution of focal problem
IPT-A versus Clinical Monitoring
Mufson et al., 1999

- N/n = 48 at baseline/33 at end of study
- 72% Female
- 71% Hispanic
- Mean Age = 15.8
- Clinic Referred with Major Depression
Mufson (1999) (continued)

- 12 weeks of weekly IPT-A sessions
- CM sessions were 1-2 / month
- 21 of 24 completed IPT-A
- 11 of 24 completed CM
- IPT-A superior to clinical management in reducing depressive symptoms
- 75% of IPT-A and 46% of CM were remitted (free of significant depressive symptoms)
IPT for Adolescents with MDD
Rossello & Bernal, 1999

- 71 Puerto Rican adolescents with MDD
- Assigned to IPT, CBT, or Wait List
- Treatment was weekly for 12 weeks
- On self-reported depressive symptoms, both IPT and CBT were effective, compared to wait list
- IPT also better than wait list for self-esteem and social adaptation
- No effects on parent-report measures
IPT-A Effectiveness
Mufson et al., 2004

- 63 adolescents at 5 school sites
- 84% Female; 71% Hispanic
- MDD: 32
- Dysthymia: 11
- MDD+DD: 4
- Depression-NOS: 7
- Adjustment Disorder-Depressed Mood: 9
What were the treatments?

- IPT-A, administered by school clinicians (6 social workers and 1 psychologist)
  - 12 sessions in 12 to 16 weeks

- Treatment as Usual, administered by school clinicians (5 social workers and 1 psychologist)
  - Mostly individual-supportive or group
Outcomes

IPT-A significantly better than TAU on:

- Interviewer-rated depression (Hamilton: 8.7 v. 12.8)
- Self-reported depression (Beck DI: 8.4 v. 12.3)
- Global functioning (CGAS: 66.7 v. 59.5)
- Global severity of depression (CGI-S: 2.4 v. 3.0)
IPT-A for Adolescent Depression

- Superior to Clinical Management
- Superior to TAU in schools
- Samples predominantly female and Hispanic
- No comparison yet to active medication, pill placebo, or combined treatment
- Effectiveness test was targeted toward more challenging setting, not toward more challenging cases
Theories Underlying CBT

- Beck’s *Cognitive Therapy*: Stress -> negative core beliefs (“I am unlovable”) -> dysfunctional attitudes (“unless everyone likes me, I am unlovable”) -> negative automatic thoughts (“she doesn’t like me”) -> other depressive symptoms

- Lewinsohn’s *CBT*: lack of positive (especially social) reinforcement -> negative thoughts -> negative mood -> social withdrawal, etc. -> downward spiral
CBT therapists

- Conduct a diagnostic assessment, along with cognitive and behavioral assessments
- Construct a case formulation OR use a set of standard procedures, to elicit and then modify negative behavior patterns and thoughts
- Cognitive therapy (Beck model) gives priority to cognition
- CBT (Lewinsohn model) emphasizes reciprocal nature of cognition, behavior, emotion
CBT for Adolescent Depression

- Early Studies
- Studies in the 1990’s
- Studies since 2000
Early Studies: Reynolds & Coats, 1986; Kahn et al., 1990

- School-based, group interventions, small samples
- Mildly to moderately symptomatically depressed adolescents
- Not formally diagnosed
- 5 weeks of CBT = Relaxation > Wait List (N = 30)
- 6-8 weeks of CBT = Self-Modeling = Relaxation > Wait List (N = 68)
Implications of Early Studies

CBT is superior to no intervention (Watchful Waiting)

CBT not superior to alternative interventions

But VERY underpowered to detect differences
American Studies in the 1990’s

- Diagnosed depressed adolescents
- Movement toward larger samples
- More clinically relevant samples and questions

- Oregon Studies: group CBT, the Adolescent Coping with Depression Course (CWD-A)
- Pittsburgh Study: individual Cognitive Therapy
First Study: Lewinsohn et al. (1990)

- 59, 14-18 year-olds
- 14, 2-hour groups in 7 weeks,
- With or without weekly parent groups
- Wait List Control
- 49% MDD; 7% Minor-D; 44% Intermittent-D

Outcome: No Depression Diagnosis:
- 43% of CWD-A
- 48% of CWD-A+Parent
- 5% of WL

- 82% of treated teens remitted at six months
Second Study: Clarke et al., 1999

- 96 adolescents with MDD or Dysthymia
- 16 two-hour group sessions of CWD-A with or without concurrent weekly parent groups (CWD-A+P) v. wait-list (WL)
- Outcome: 65% of CWD-A and 69% of CWD-A+P were below diagnostic threshold versus 48% of WL
- Parent groups did not affect outcome
Pittsburgh CT Study

- Brent et al., 1997: 107 adolescents with MDD
- CT, Nondirective Supportive Therapy (NST), or Systems Behavioral Family Therapy (SBFT)
- 12 to 16 sessions in as many weeks
- Outcome: no MDD and 3 consecutive weekly normal Beck Depression Inventory scores (<9)
Pittsburgh CT Study

- Remission rates at termination:

  60% for CT
  38% for SBFT
  39% for NST
Is Cognitive Therapy Enough?

- During study treatment (12-16 weeks), 11% of CBT, 11% of Family, and 14% of Supportive treatment adolescents received additional treatment.
- These teens had more severe depression at week 6, and were more likely to have had Dysthymia.
Treatment During 2-Year Follow-Up

49% of CBT, 37% of SBFT, and 40% of NST adolescents obtained additional treatment.

These adolescents had had more severe MDD, more disruptive behavior disorders, and more family conflict at intake.
Two-Year Follow-Up

- Recovery: 84% of adolescents had recovered
- No differences in recovery rates across 3 treatments
- Recurrence: 30% of adolescents had a recurrent episode of MDD during the two year follow-up period
Implications of 1990’s Studies

- CBT is effective with diagnosed depressed adolescents
- CT better than two alternative psychotherapies
- Unclear how to include parents in treatment
- Oregon studies suggest that outcomes may depend greatly on sample characteristics
Recent Studies: TADS, TORDIA, ADAPT

- **TADS**: moderately to severely depressed adolescents
- **TORDIA**: adolescents who had failed a medication trial
- **ADAPT**: British NHS sample of seriously depressed adolescents, with extremely few exclusion criteria
- Adolescents were more seriously depressed than those in early CBT studies, probably more so than in one of the Oregon studies
- Progressively more challenging samples
- More challenging research designs
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- NIMH: Benedetto Vitiello, Joann Severe
- CBT Consultants: Greg Clarke, David Brent
Sites and Principal Investigators

- Columbia/NYU [Albano and Waslick]
- Chicago/Northwestern [Reinecke]
- Wayne State [Rosenberg]
- Nebraska [Kratochvil]
- UT Southwestern [Emslie]
- Oregon (UO and ORI) [Rohde and Simons]
- Children’s Hospital of Philadelphia [Weller]
- Johns Hopkins [Walkup]
- Cincinnati [Pathak]
- Case Western [Feeny]
- Carolinas Medical Center [Casat]
Stages of Treatment in TADS

- Stage I: Acute treatment for 12 weeks
- Stage II: Consolidation for 6 weeks
- Stage III: Maintenance for 18 weeks
TADS Treatments

- Clinical management with fluoxetine [FLX]
- Clinical management with pill placebo [PBO]
- Cognitive behavior therapy [CBT]
- CBT + FLX [COMB]

- Placebo ended at Week 12
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*First visit = 50 minutes; later visits = 20-30 minutes
TADS CBT

- Combined elements of Beck/Brent model and Lewinsohn/Clarke model
- Adolescent session manual: Curry, Wells, Brent, Clarke, Rohde, Albano, Reinecke, Benazon, & March
- Family session manual: Wells & Curry
Required Elements of TADS CBT

- Mood monitoring
- Goal-setting
- Increasing pleasant activities
- Problem-solving
- Automatic thoughts and cognitive distortions
- Realistic counterthoughts
Optional Elements of TADS CBT

- Relaxation
- Affect regulation
- Social interaction
- Assertion
- Communication
Required Parent Sessions

- Parents included in CBT session 1, for overall rationale and safety plan
- Parent psychoeducation session on adolescent behavioral skills
- Parent psychoeducation session on adolescent cognitive skills
- One required interactive family session
Optional Family Sessions

- Family attachment and commitment
- Family problem-solving
- Family communication
- Family contingency management
- Parental expectations and positive reinforcement
Sample Characteristics

- 439 teens (age 12-17) with current MDD, at least six weeks of depression, and functional impairment in 2 to 3 settings (school, family, peers)
- 74% Caucasian, 12% African-American, 9% Hispanic
- 54% female
- Co-morbid GAD (15%), ADHD (14%), ODD (13%), Social Phobia (11%), Dysthymia (9%)
- Episode Duration: Mean = 19 mos.; Mdn. = 10.5 mos.
- Global Functioning (CGAS): Mean = 49
Acute Treatment Results: Week 12

- Children’s Depression Rating Scale-Revised rated by Independent Evaluator

- Clinical Global Impression-Improvement rated by Independent Evaluator
  - Ratings of 1 (very much improved) or 2 (much improved) = Responder
  - Ratings of 3 to 7 = Non-Responder
CDRS-R: Adjusted Means (ITT)
Baseline Predictors of Better Outcome (regardless of treatment)

- Younger age
- Less than 40 weeks MDD duration
- Better global functioning
- Less suicidal ideation
- Less hopelessness
- No anxiety disorder
- Higher expectation for improvement with assigned treatment
Moderators of Treatment Effects

- **Severity:**
  COMB > FLX only for youths with mildly or moderately severe depression

- **Cognitive Distortions:**
  COMB > FLX only in youths with higher levels of cognitive distortion

- **Family Income, top quartile:**
  CBT = COMB for youths from high income families
Much/Very Much Improved:  Week 12: LOCF
What Happened after Week 12?

- Non-Responders and Partial Responders to PBO offered study treatment of choice
- Responders to PBO given phone follow-up and treatment of choice if relapsed
- Responders and Partial Responders to FLX, CBT, or COMB proceed to Stage II
- Non-Responders to FLX, CBT, or COMB referred to community care
Week 36 ITT Analysis: CDRS-R

![Graph showing the mean CDRS-R scores over time for different treatment groups.](image-url)
Much/Very Much Improved: Week 12: GEE

![Bar chart showing the improvement percentages for COMB, FLX, and CBT. COMB has the highest percentage at 73%, followed by FLX at 62%, and CBT at 48%.]
Much/Very Much Improved: Week 18

- COMB: 85
- FLX: 69
- CBT: 65
Much/Very Much Improved: Week 36

- COMB: 86
- FLX: 81
- CBT: 81
Continuation and Maintenance Treatment

- The gap between CBT and FLX closes by Week 18 on CGI-I Response.
- On the CDRS-R, FLX remains superior to CBT until Week 24, when FLX and CBT are no longer different;
- COMB remains superior to CBT at Week 24
- All 3 treatments converge at Week 30
Safety Considerations

- Suicidal Ideation
- Suicidal Events
Suicidal Ideation Questionnaire

Stage I Assessments

Mean Total Score

Baseline | Week 6 | Week 12

COMB
FLX
CBT
PBO
Suicidal Events Through 36 Weeks

Columbia Classification Scheme

Attempt
Preparatory Action
Ideation leading to intervention
NOT self-harm without intent
Percentage of Patients with a Suicidal Event by Week 36
Suicidal ideation improves across all treatments. Improvement is less in FLX-alone than in CBT-containing conditions. CBT is significantly safer than FLX in terms of suicide-related events. COMB gives the advantage of a faster and more complete response for depression and a greater degree of safety. Safety is not absolute, either in COMB or in CBT-alone.
Cost Effectiveness and Global Functioning

- At Week 12, the greatest improvement in functioning was in the COMB group, and this was mediated by improvements in depression.
- At Week 12, the most cost effective treatment was FLX.
- By Week 36, the most cost effective treatment was COMB.
- Costs associated with FLX rose because of additional treatment outside of TADS (outpatient, emergency, inpatient).
Treatment of SSRI-Resistant Depression in Adolescents

334 adolescents who had not responded to 8 weeks of SSRI

Randomized to CBT or no CBT; and to a different SSRI or to venlafaxine

TORDIA CBT = TADS CBT with fewer trial-specific rules and with more emotion-regulation components

After 12 weeks, response rate higher in CBT (54.8%) than in no-CBT (40.5%)

No medication effect
208 adolescents received routine NHS care and fluoxetine (FLX)
Half also received CBT
Specifics of CBT not clear
At 28 weeks, 57% of adolescents were responders (much or very much improved)
No additive effects of CBT over SSRI + routine care
Summary

- CBT has been tested far more than any other psychotherapy for adolescent depression
- CBT > wait list
- CBT > two alternative psychotherapies
- CBT not superior to clinical management with pill placebo [no other adolescent psychotherapy has made this comparison]
- CBT slower than FLX, but ‘catches up’
- CBT lowered the risk of suicidal events in TADS
Summary (continued)

- CBT did not add to routine care + medication with the seriously depressed ADAPT sample
- CBT did not add to FLX in TADS acutely with the severely depressed adolescents
- Combined CBT + fluoxetine had the optimal outcomes for depression, functioning, suicidal events, and cost effectiveness in TADS
- CBT + SSRI or venlafaxine led to better response than medications alone in TORDIA
Where to Go From Here

- Identify essential elements of CBT for adolescent depression
- Clarify how to involve parents
- Streamline earliest phase of CBT
- Test CBT against alternative models (IPT-A; ABFT, etc.)
- AND move focus to relapse prevention
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:**

**Books:**

**Peer-reviewed Journal Articles:**
Keynote: Evidence-based Treatment of Depression in Adolescents

Websites:

Books:

Peer-reviewed Journal Articles:


Goodyer I, Dubicka B, Wilkinson P, et al. Selective serotonin reuptake inhibitors (SSRIs) and routine specialist care with and without cognitive behaviour therapy in adolescents with major depression. BMJ. 2007;335(7611):142. (Link to: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1925185/)


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