

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

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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)
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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
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Prevalence: Costello, Erkanli, & Angold (2006)

- 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%
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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%
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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
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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
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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
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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
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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
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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)
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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
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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
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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
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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
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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
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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
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CBT for Adolescent Depression

- Early Studies
 - Studies in the 1990's
 - Studies since 2000
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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)
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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
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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
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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
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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)
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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
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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
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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
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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
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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]
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Stages of Treatment in TADS

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

- Clinical management with fluoxetine [FLX]
 - Clinical management with pill placebo [PBO]
 - Cognitive behavior therapy [CBT]
 - CBT + FLX [COMB]
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- Placebo ended at Week 12
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FLX/PBO Visits and Dosing

■ 1 st Week*	Office Visit	10mg
■ 2 nd Week	Office Visit	20mg
■ 3 rd Week	Phone	20mg
■ 4 th Week	Office Visit	20-30mg
■ 5 th Week	Phone	20-30mg
■ 6 th Week	Office	20-40mg
■ 7 th and 8 th Week	Phone	20-40mg
■ 9 th Week	Office Visit	20-40mg
■ 10 th and 11 th Week	Phone	20-40mg
■ 12 th Week	Office Visit	20-60mg

*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
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Optional Family Sessions

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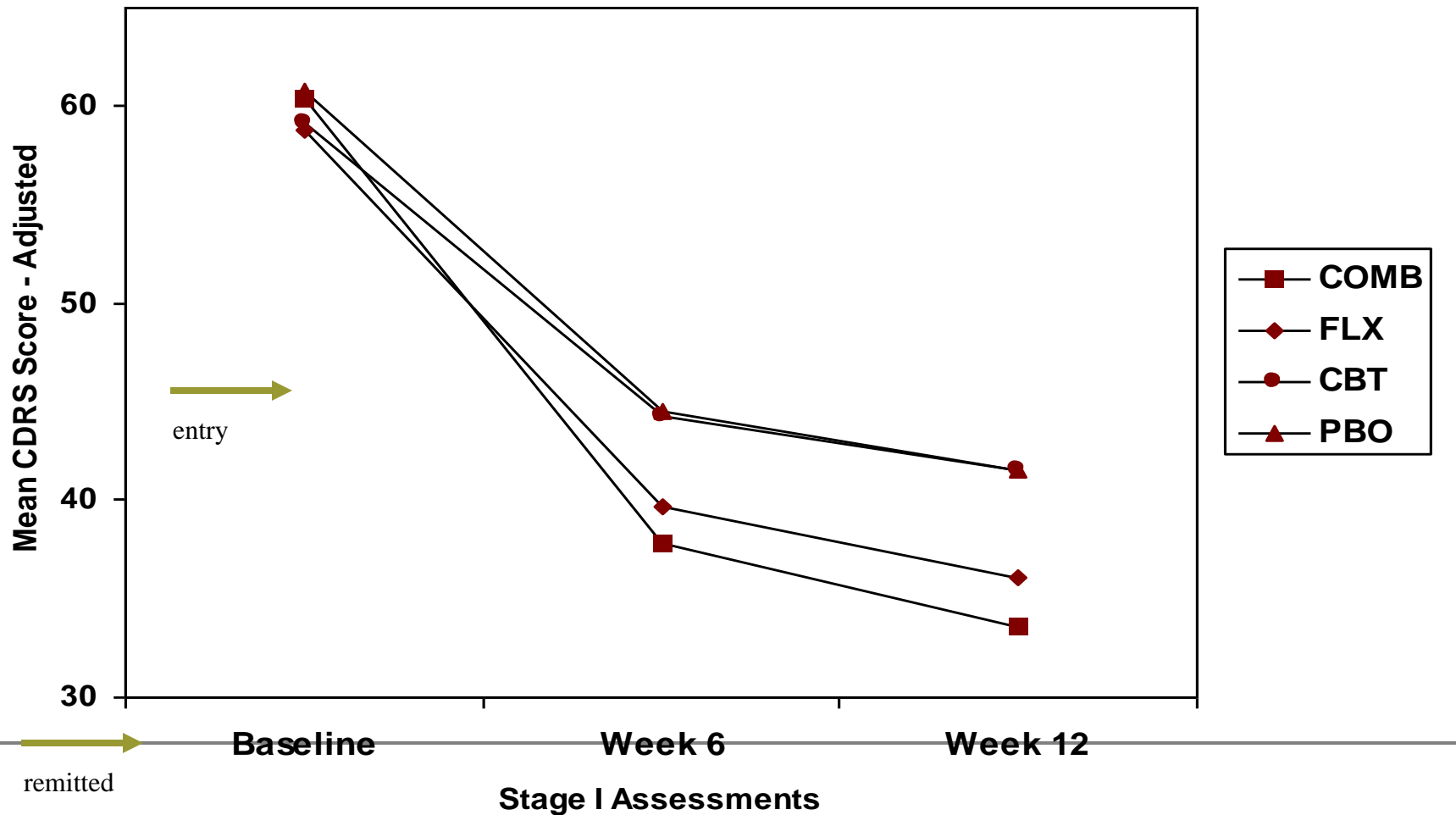
Sample Characteristics

- **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**
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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
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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
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Moderators of Treatment Effects

- **Severity:**

COMB > FLX only for youths with mildly or moderately severe depression

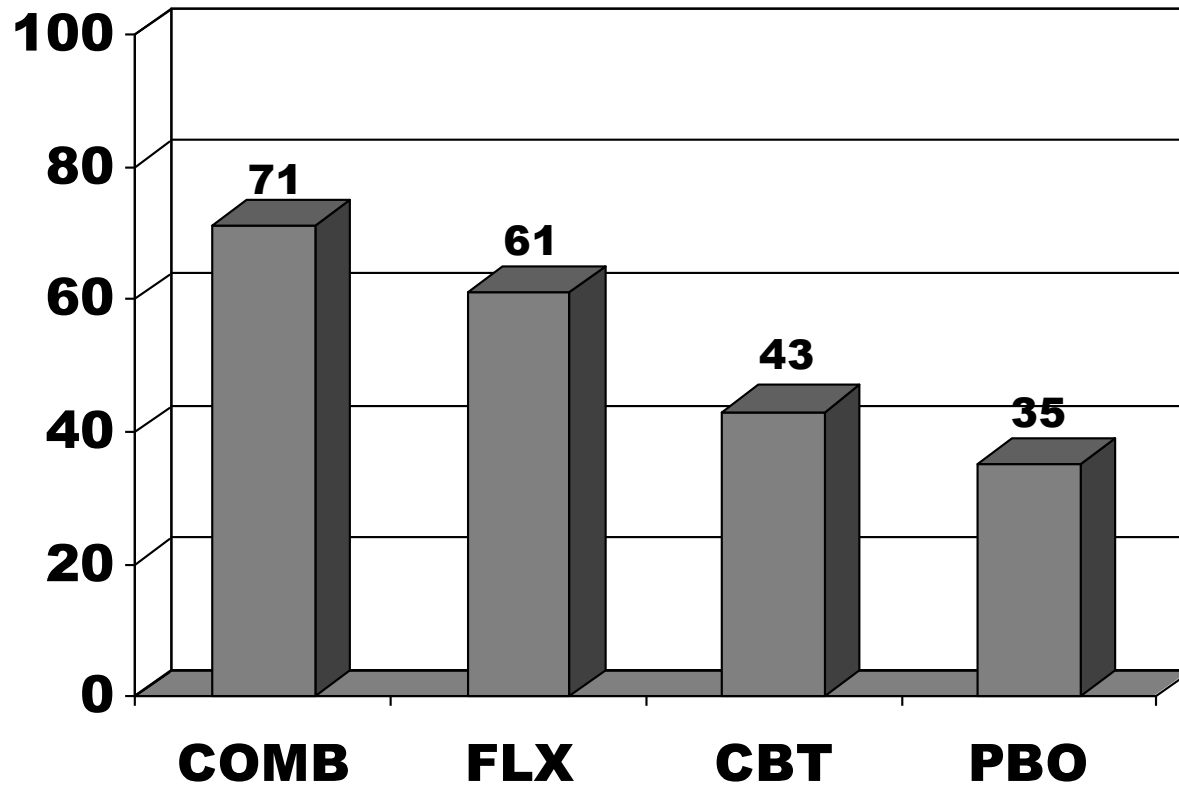
- **Cognitive Distortions:**

COMB > FLX only in youths with higher levels of cognitive distortion

- **Family Income, top quartile:**

CBT = COMB for youths from high income families

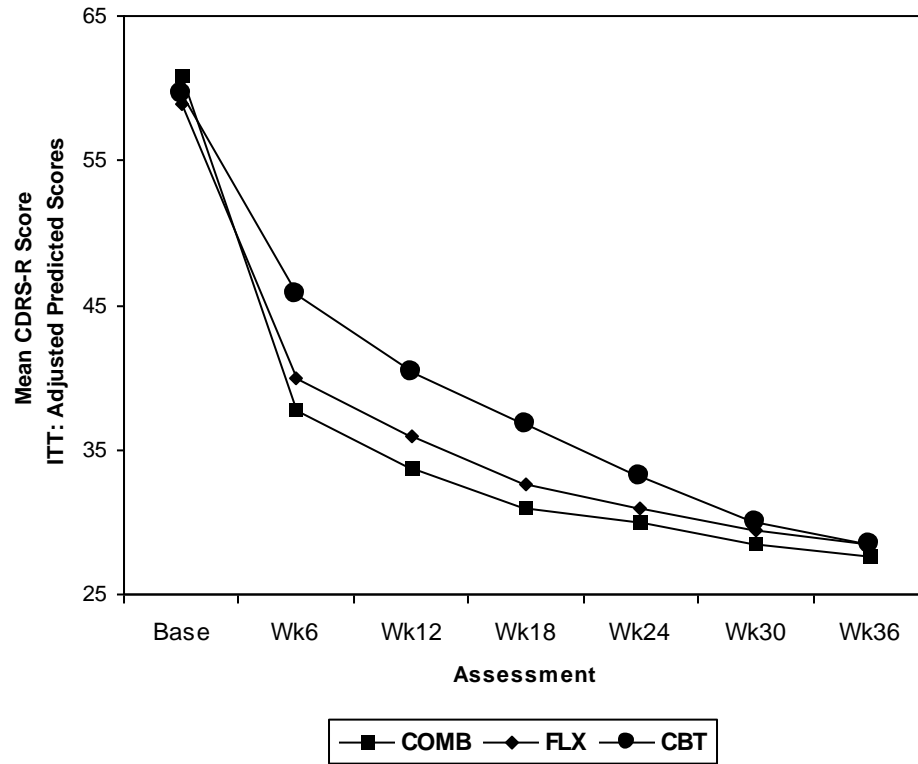
Much/Very Much Improved: Week 12: LOCF



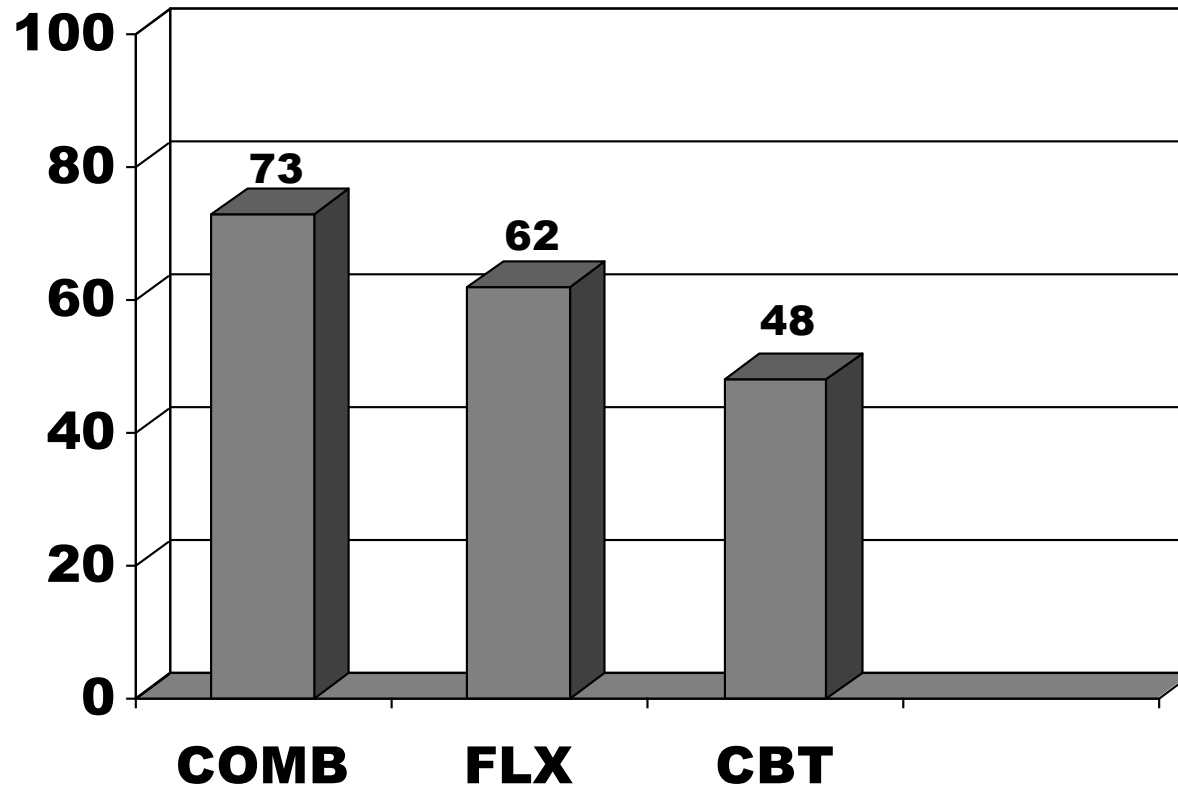
What Happened after Week 12?

- 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
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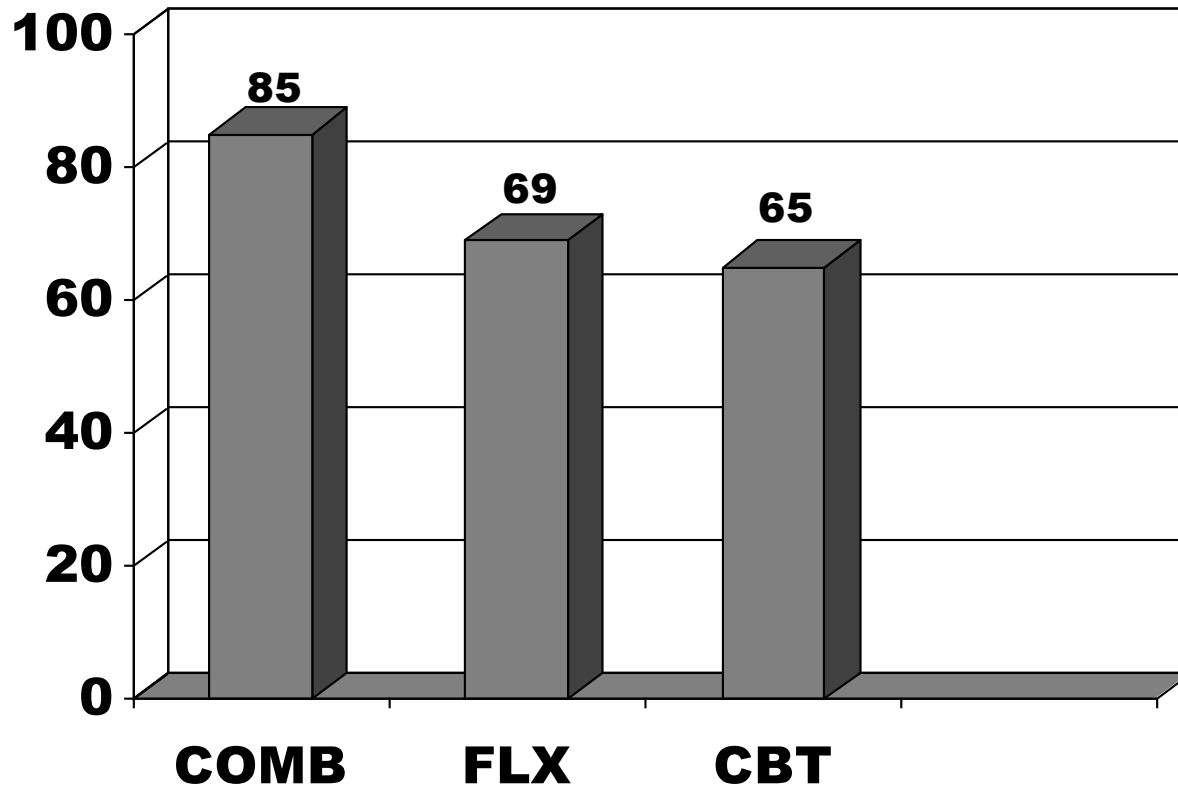
Week 36 ITT Analysis: CDRS-R



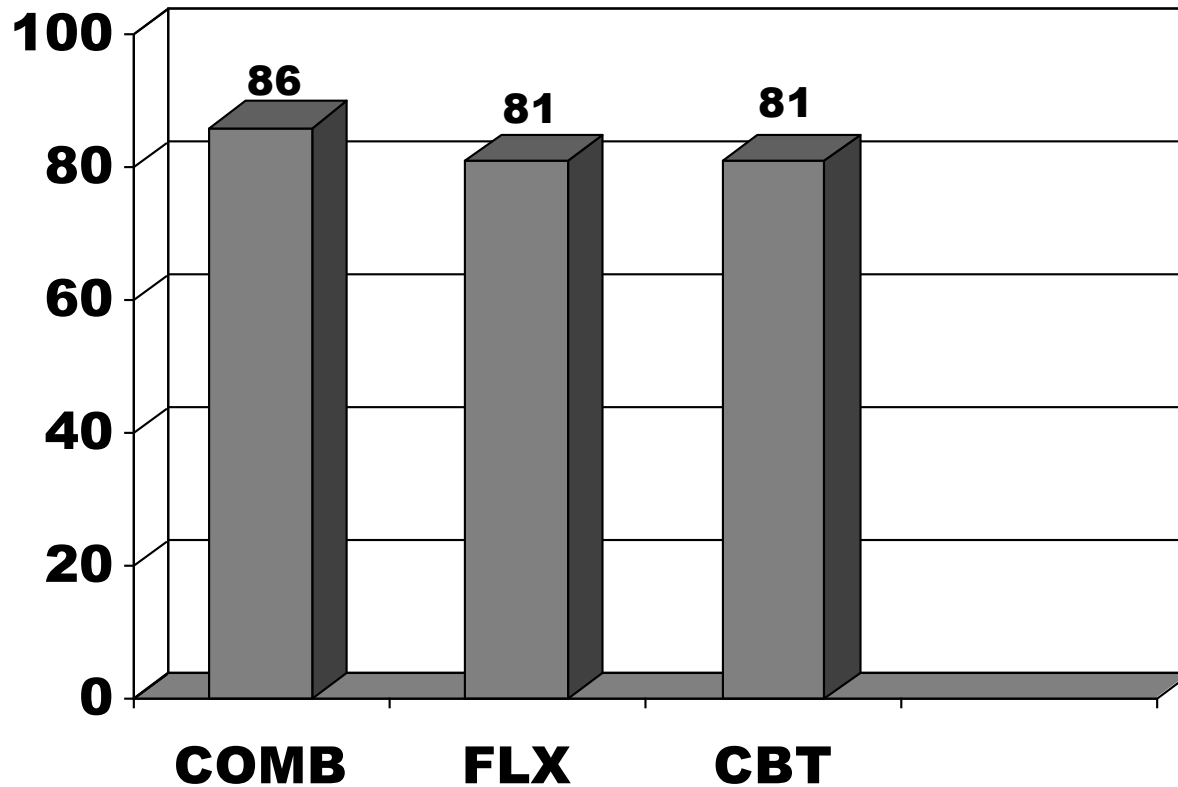
Much/Very Much Improved: Week 12: GEE



Much/Very Much Improved: Week 18



Much/Very Much Improved: Week 36



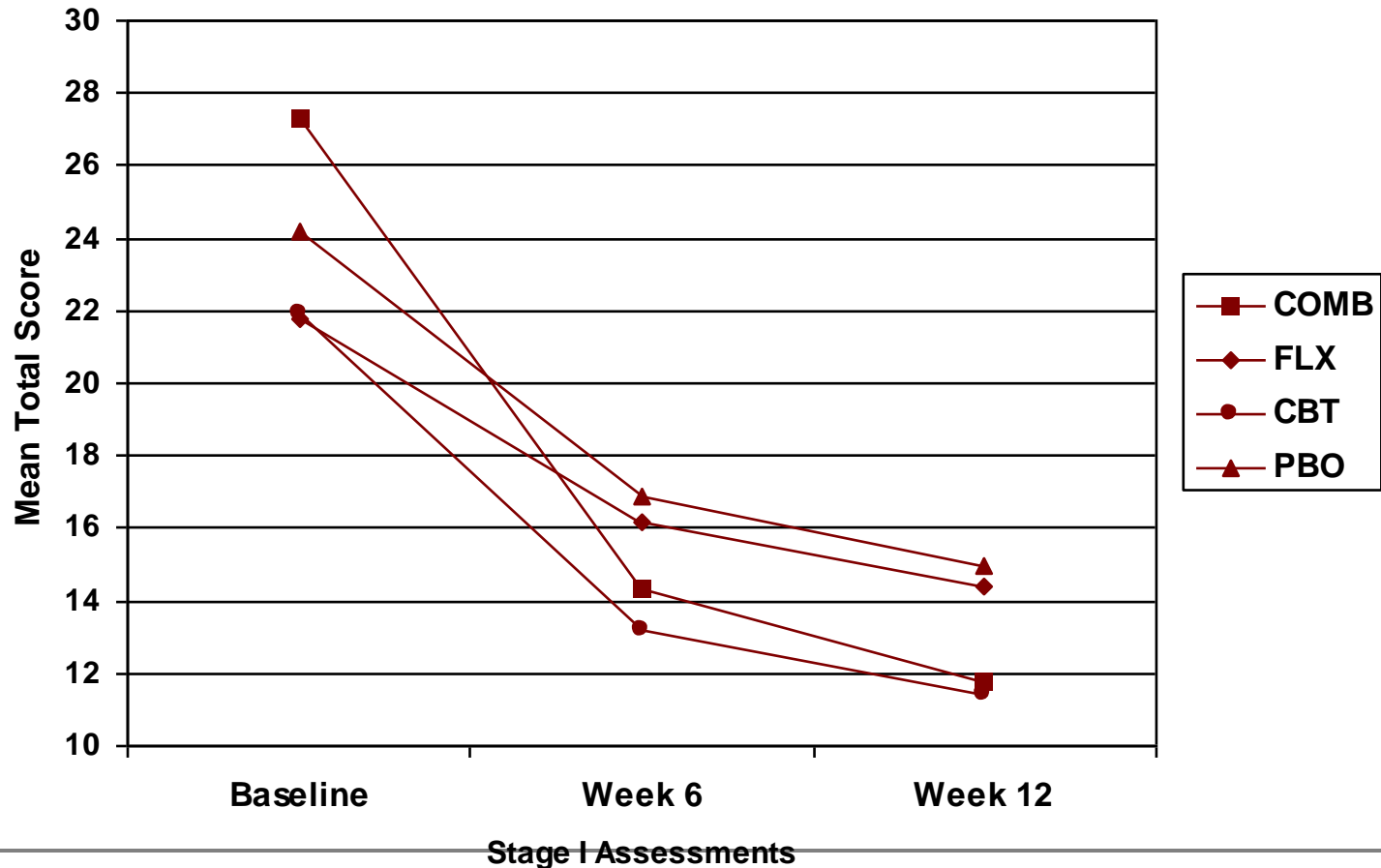
Continuation and Maintenance Treatment

- 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
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Safety Considerations

- Suicidal Ideation
 - Suicidal Events
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Suicidal Ideation Questionnaire



Suicidal Events Through 36 Weeks

Columbia Classification Scheme

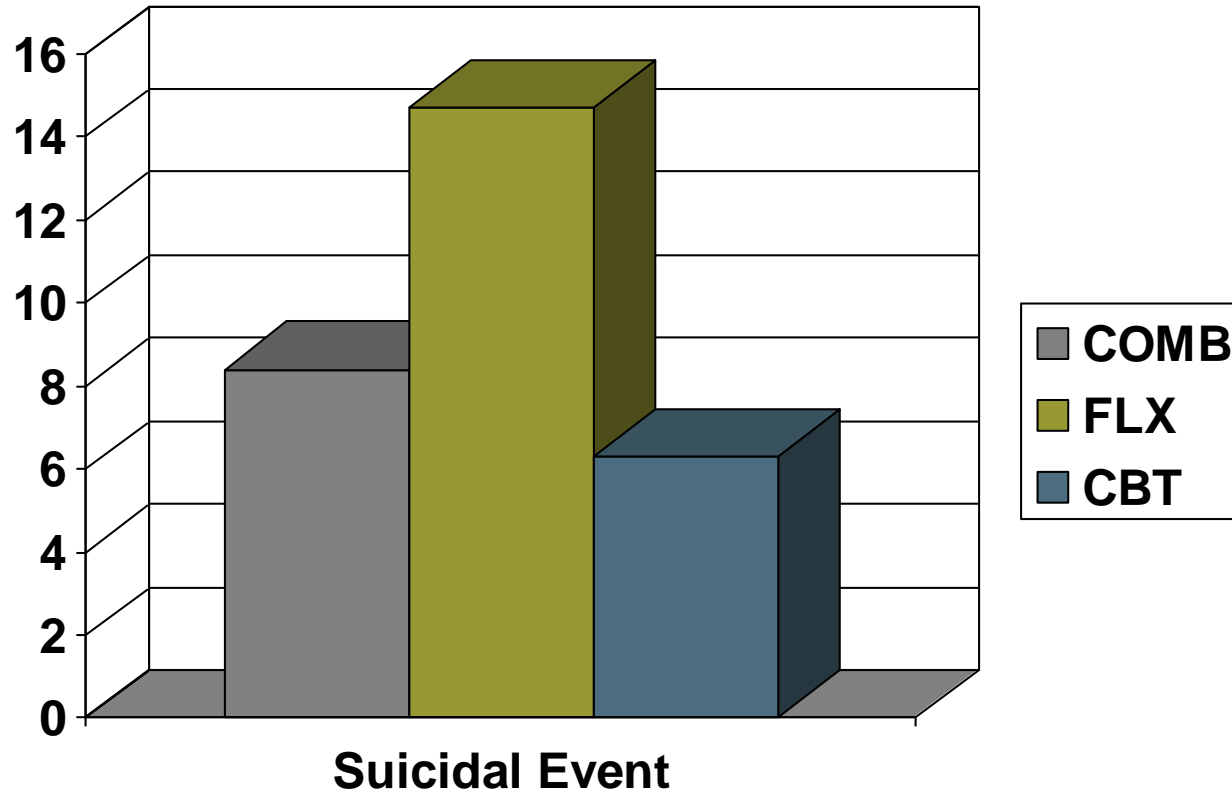
Attempt

Preparatory Action

Ideation leading to intervention

NOT self-harm without intent

Percentage of Patients with a Suicidal Event by Week 36



Safety Conclusions

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)
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TORDIA; Brent et al., 2008

- 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
-

ADAPT; Goodyer et al, 2007

- 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
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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
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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
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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:

1. Society of Clinical Child and Adolescent Psychology website: <http://effectivechildtherapy.com>
2. National Alliance on Mental Illness website: <http://www.nami.org/>

Books:

1. Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford.
2. Weisz, J.R., & Kazdin, A.E. (Eds.). (2010). *Evidence-based psychotherapies for children and adolescents*. New York: Guilford Press.
3. Wilkes, T., Belsher, G., Rush, A.J., & Frank, E. (1994). *Cognitive therapy for depressed adolescents*. New York: Guilford

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1. Costello, J. E., Erkanli, A. and Angold, A. (2006), Is there an epidemic of child or adolescent depression? *Journal of Child Psychology and Psychiatry*, 47: 1263–1271.
2. Curry, J.F., & Wells, K.C. (2005). Striving for effectiveness in the treatment of adolescent depression: Cognitive behavior therapy for multi-site community intervention. *Cognitive & Behavioral Practice*, 12, 177-185.
3. Diamond GS, Reis BF, Diamond GM, Siqueland L, Issacs L. Attachment-based family therapy for depressed adolescents: a treatment development study. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2002;41(10):1190-1196. 3.
4. Ginsburg, G.S., Albano, A.M., Findling, R.L., Kratochvil, C., & Walkup, J. (2005). Integrating cognitive behavioral therapy and pharmacotherapy in the treatment of adolescent depression. *Cognitive & Behavioral Practice*, 12, 252-262.
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7. Wells, K.C., & Albano, A.M. (2005). Parent involvement in CBT treatment of adolescent depression: Experiences in the TADS. *Cognitive & Behavioral Practice*, 12, 209-220.
8. David-Ferndon, C., Kaslow, N. J. (2008). Evidence-based psychosocial treatments for child and adolescent depression. *Journal of Clinical Child & Adolescent Psychology*, 37, 62-104.

