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.

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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)

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

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%

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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- 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

FLX/PBO Visits and Dosing

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

Optional Family Sessions

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

Sample Characteristics

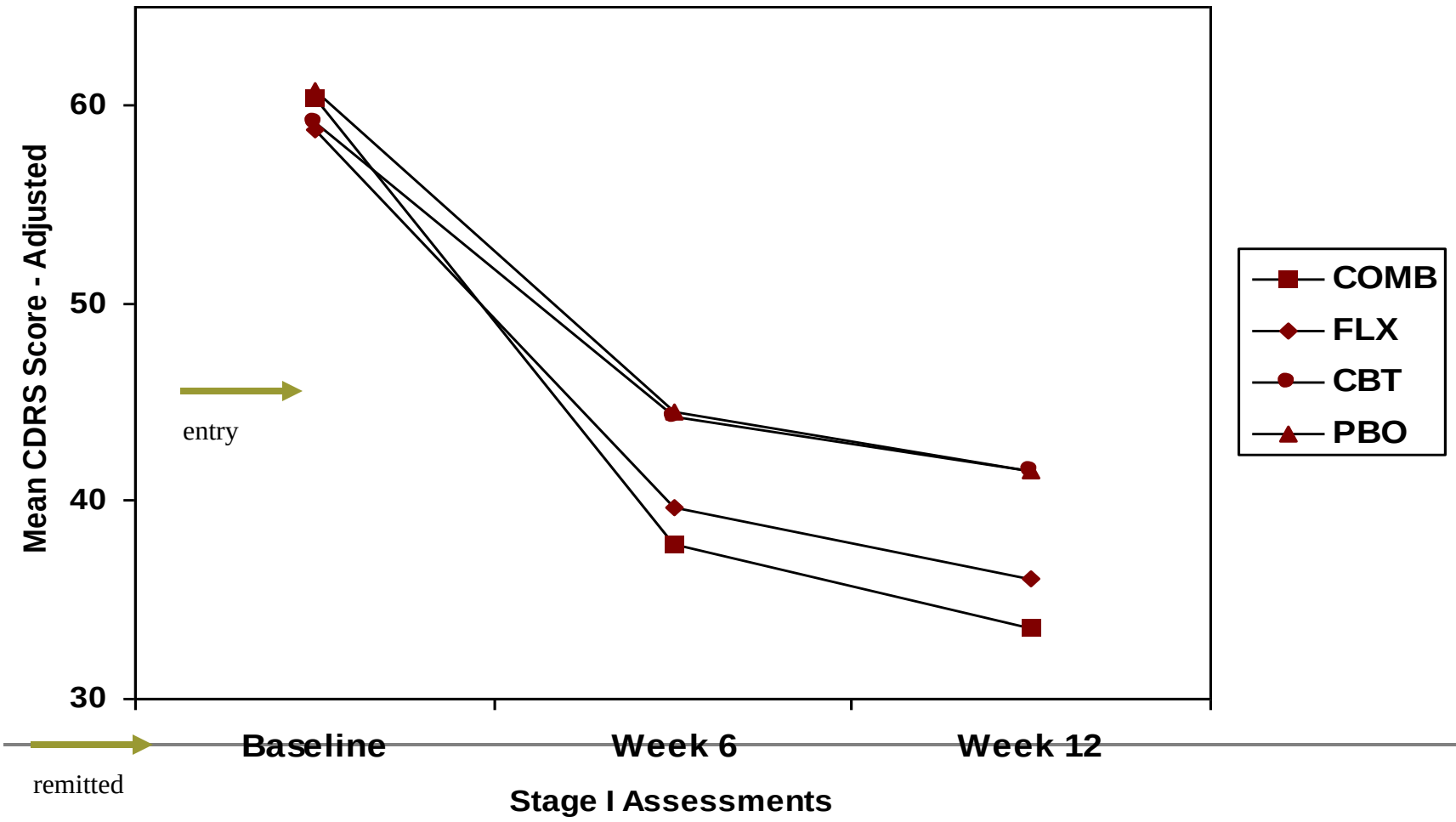
- **439 teens (age 12-17) with current MDD, at least six weeks of depression, and functional impairment in 2 to 3 settings (school, family, peers)**
- **74% Caucasian, 12% African-American, 9% Hispanic**
- **54% female**
- **Co-morbid GAD (15%), ADHD (14%), ODD (13%), Social Phobia (11%), Dysthymia (9%)**
- **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

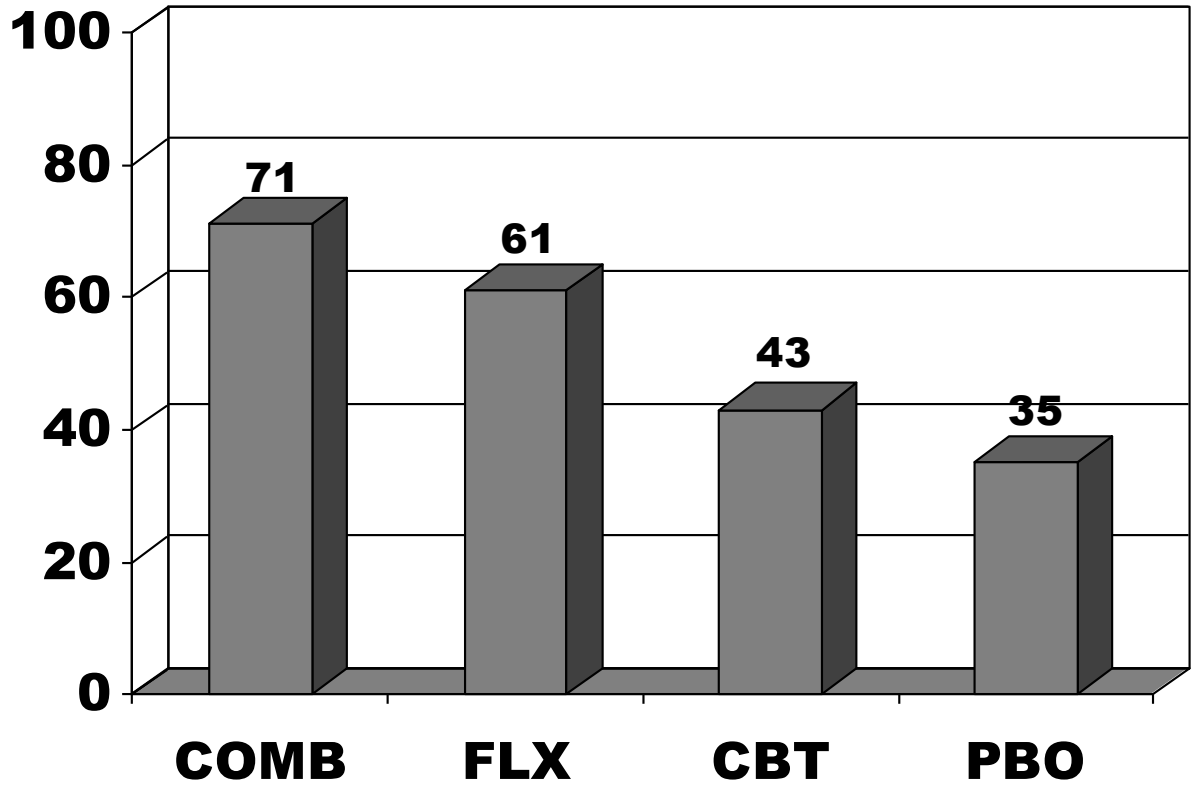
- Cognitive Distortions:

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

- Family Income, top quartile:

  CBT = COMB for youths from high income families

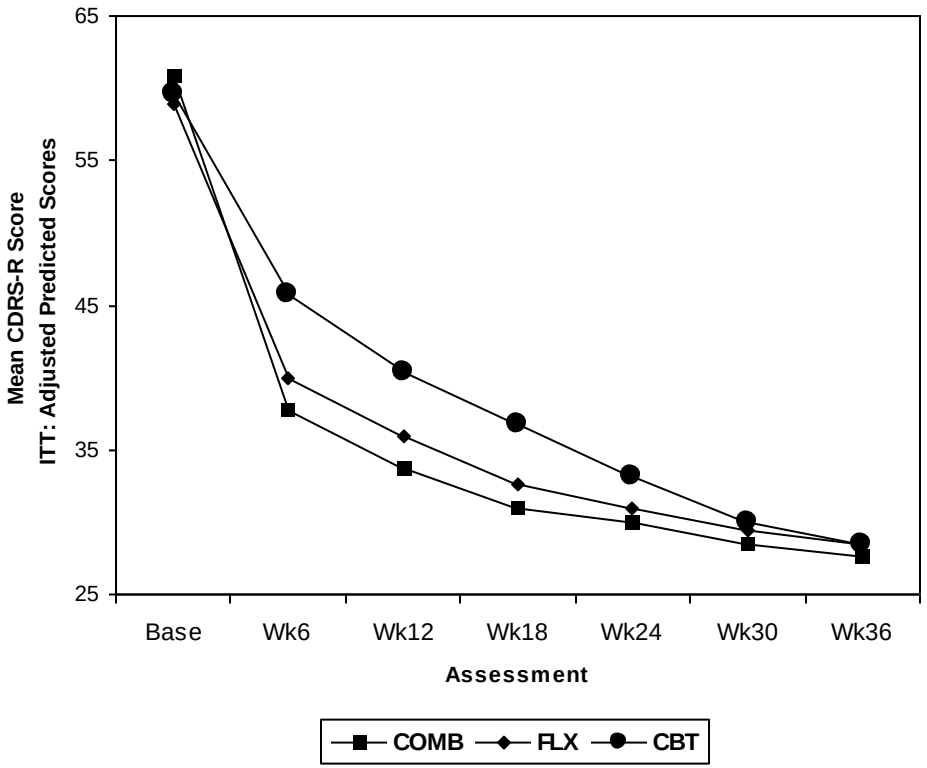
Much/Very Much Improved: Week 12: LOCF



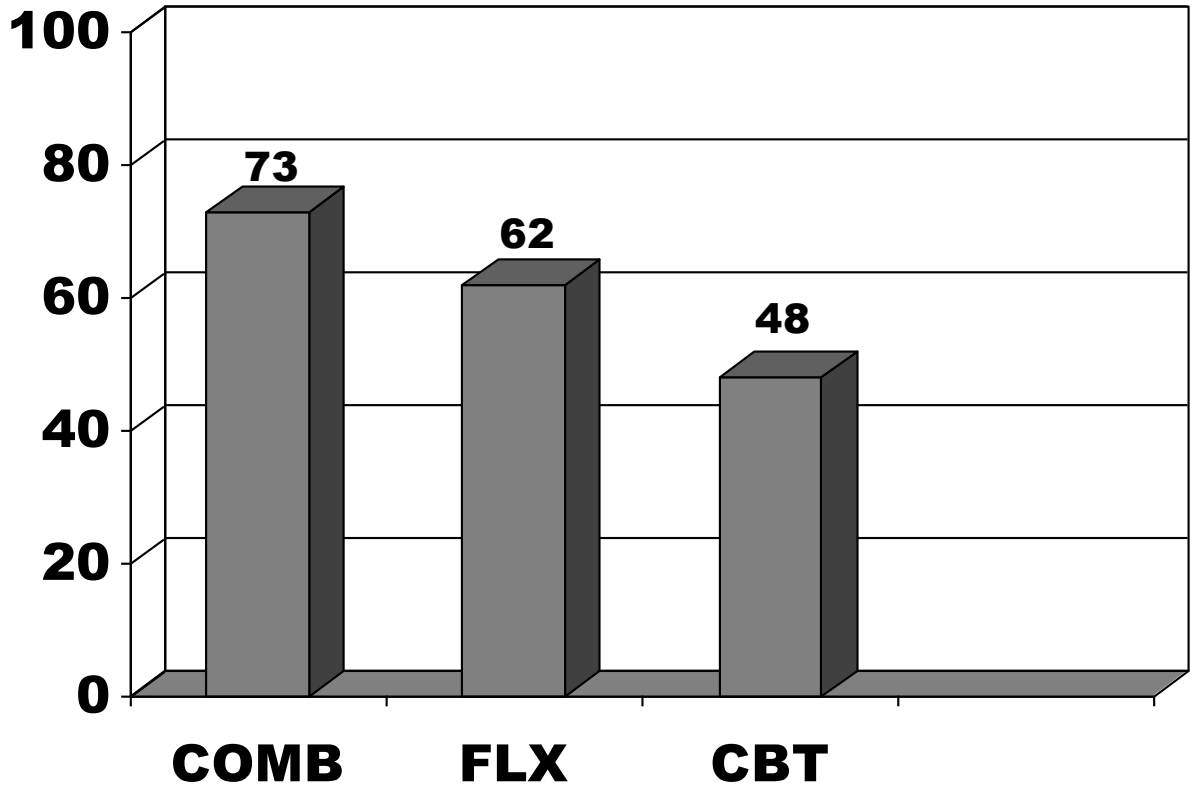
What Happened after Week 12?

- 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

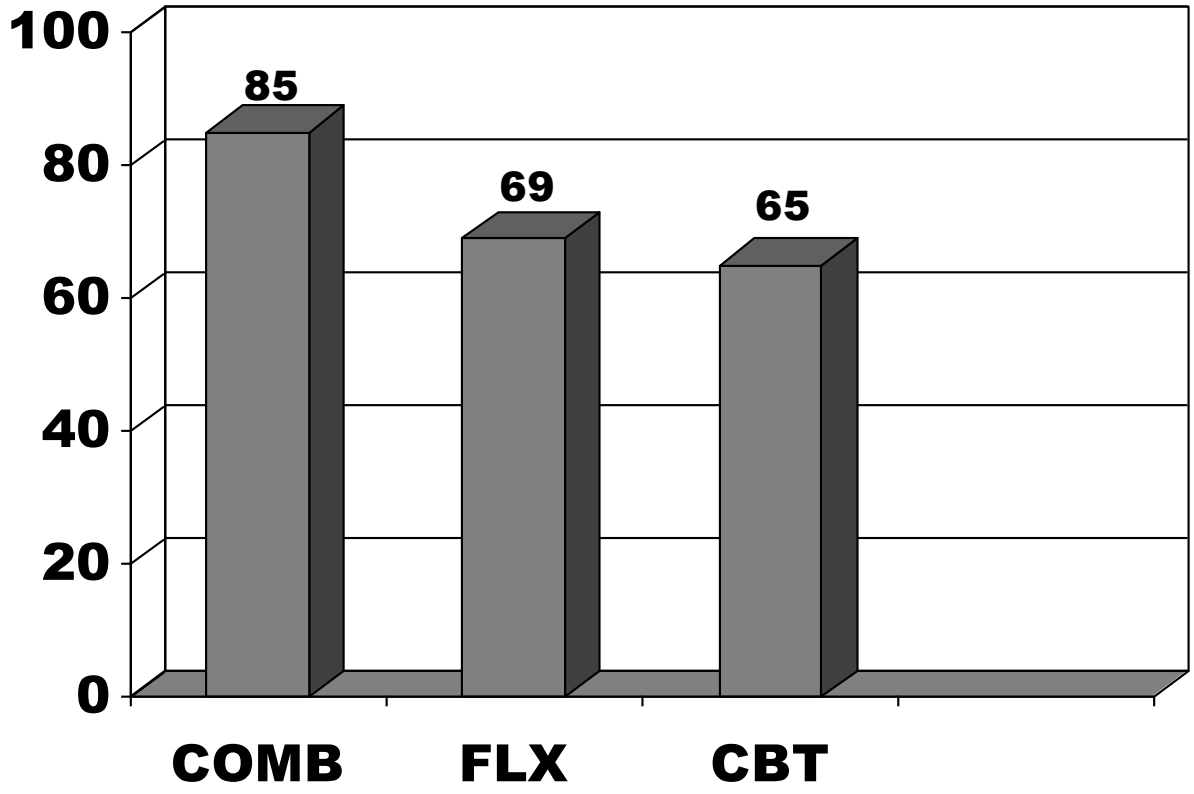
Week 36 ITT Analysis: CDRS-R



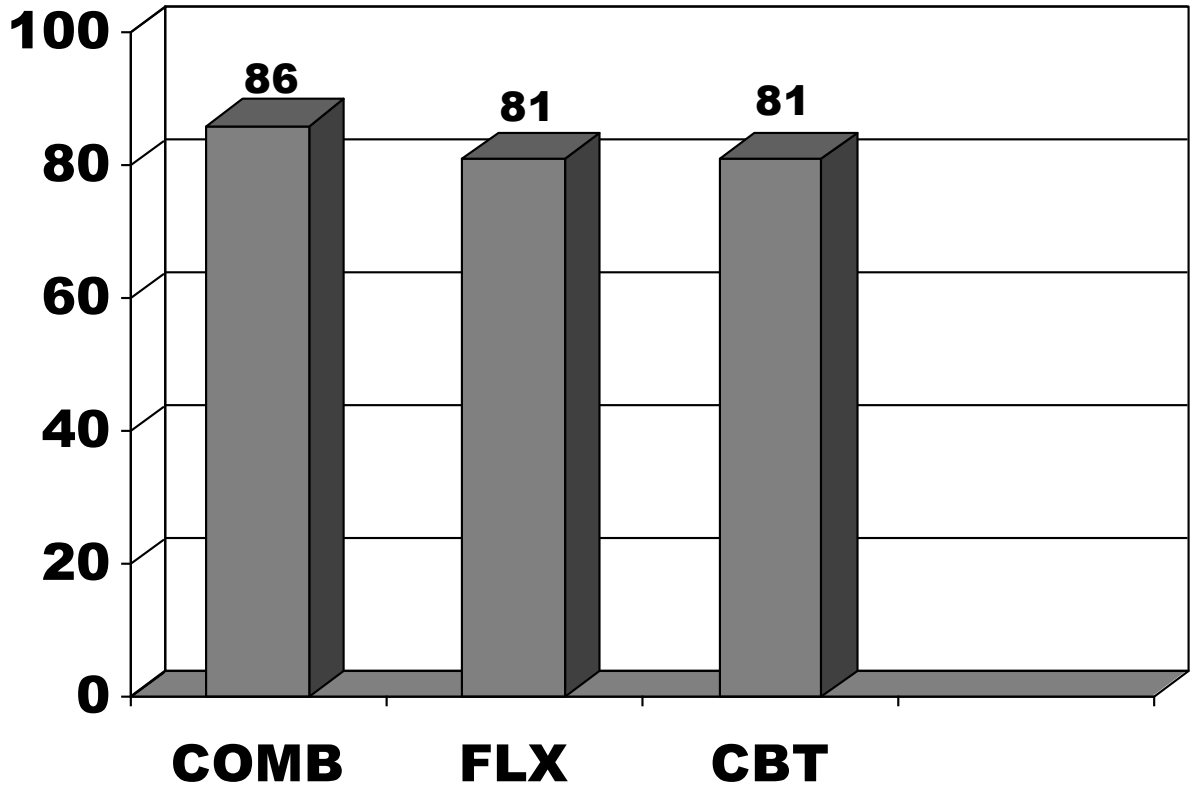
Much/Very Much Improved: Week 12: GEE



Much/Very Much Improved: Week 18



Much/Very Much Improved: Week 36



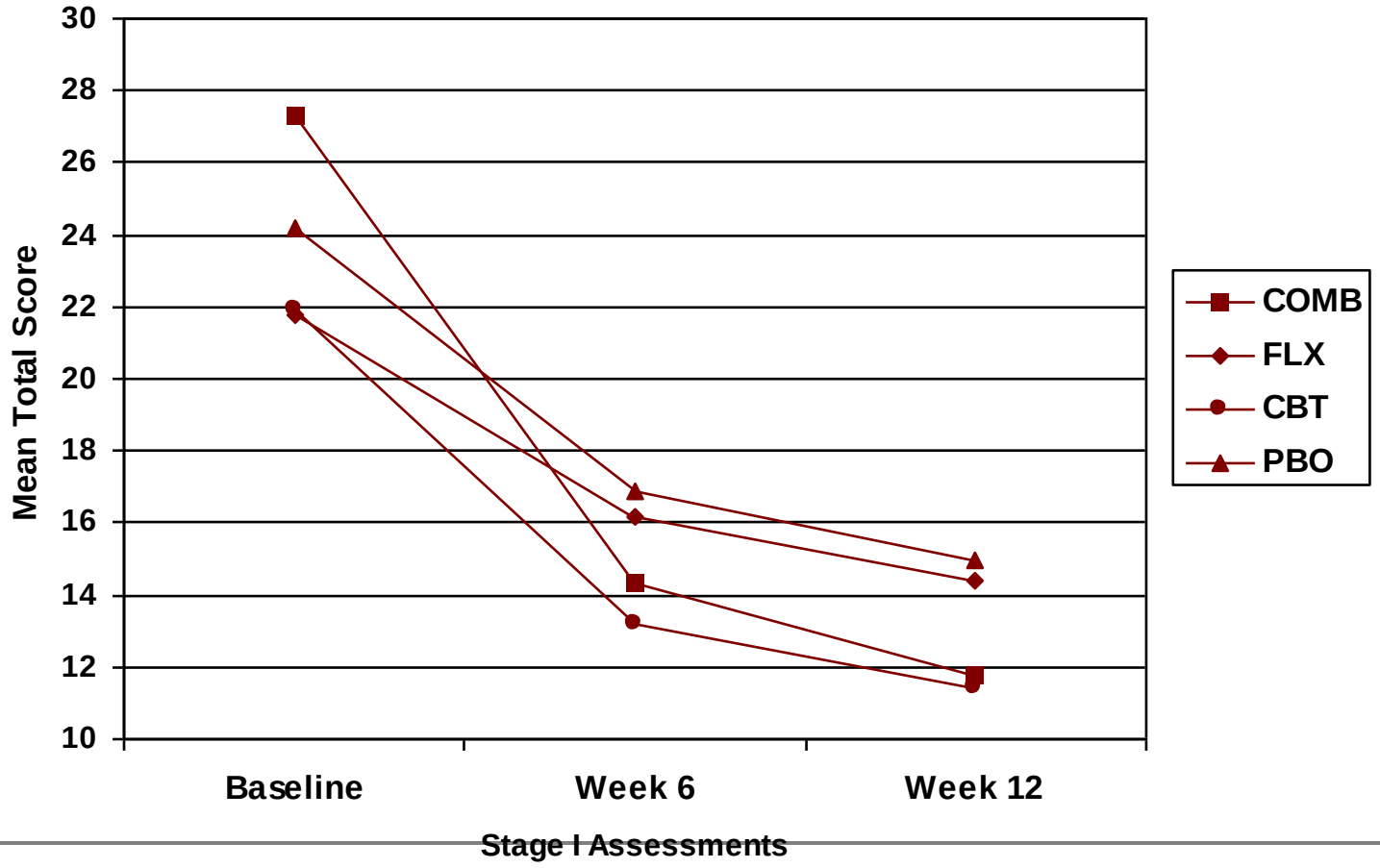
Continuation and Maintenance Treatment

- 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

Safety Considerations

- Suicidal Ideation
- Suicidal Events

Suicidal Ideation Questionnaire



Suicidal Events Through 36 Weeks

Columbia Classification Scheme

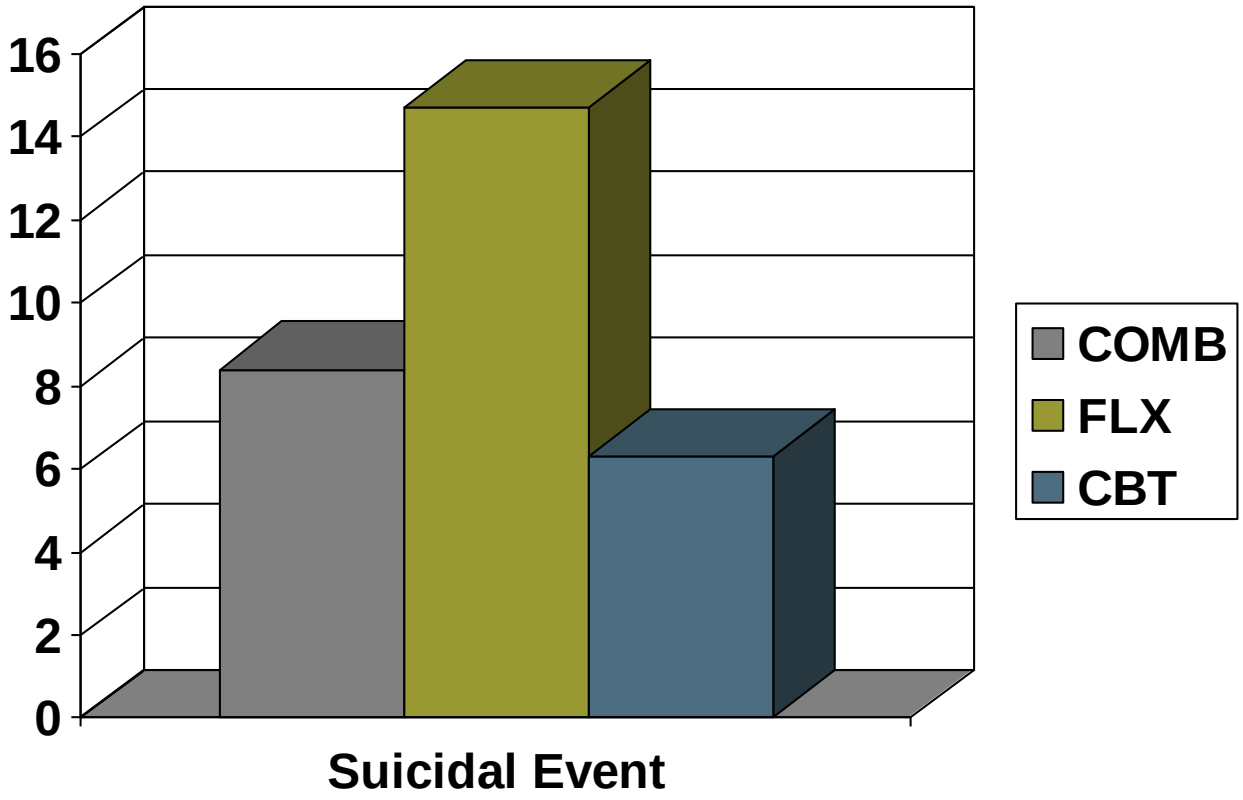
Attempt

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)

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

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:

1. Society of Clinical Child and Adolescent Psychology website: http://effective childtherapy.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.
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