Examining the Effectiveness of Modular Psychotherapy in a Community Clinic: Two Analytic Approaches

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Modular Psychotherapy Approaches

- Modular therapy has been proposed as one method to bring evidence based treatment (EBT) interventions into clinical practice settings
- Individualized, evidence based treatment plans that combine intervention elements from multiple EBTs
- Research shows that clinicians have better attitudes about evidence based practices when trained in a modular approach (Borntrager et al., 2009)

Is Modular Therapy Effective?

- Efficacy studies comparing standard EBT protocols to individualized approaches generally find no difference
- One effectiveness study of case-conceptualization based CBT found similar treatment outcomes to research trials of CBT (Persons et al., 2006)
- Limitations:
  - Studies looked at specific diagnostic groups
  - Only a small range of EBT interventions were included

Goals of the Current Research

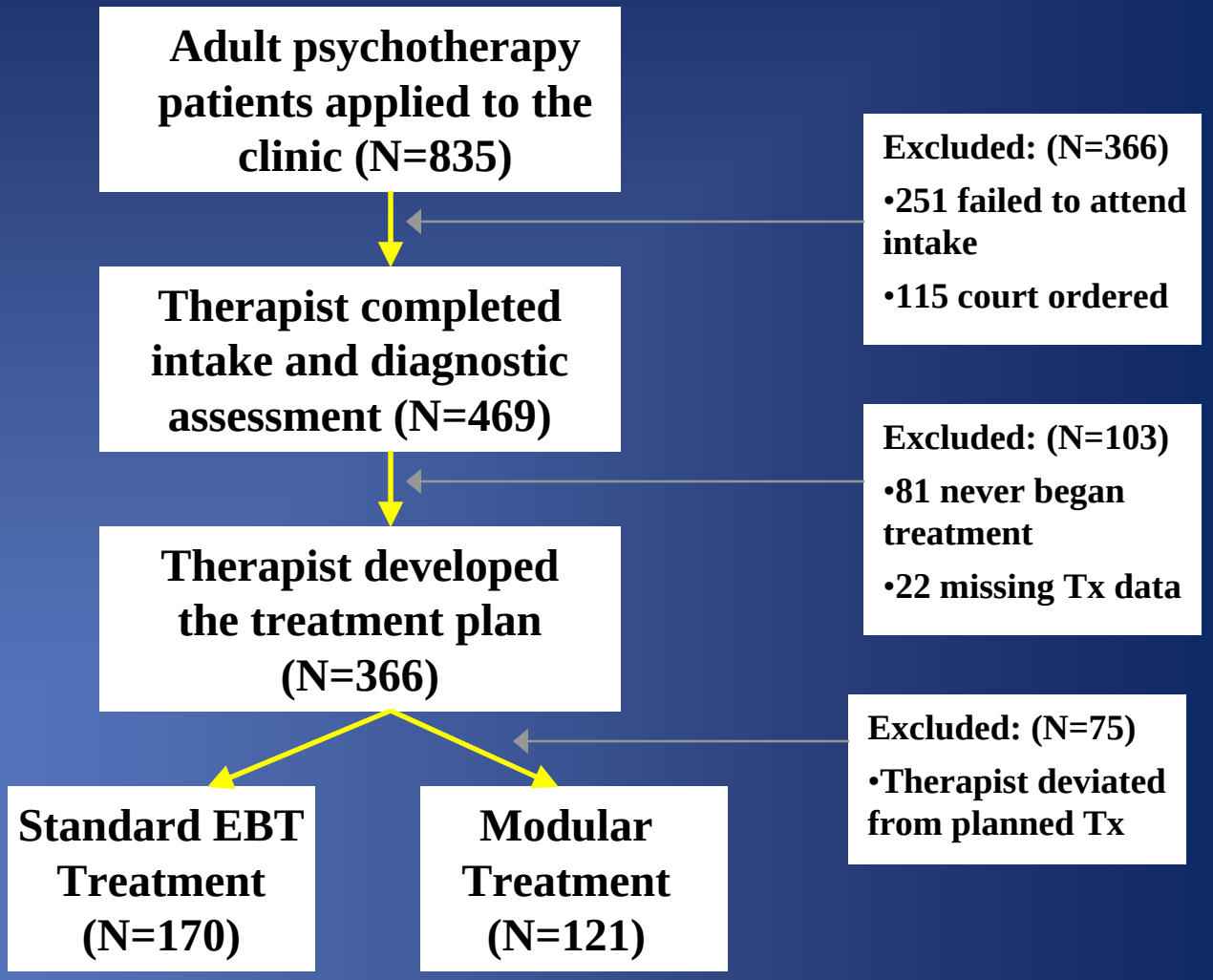
- Build on prior studies by examining effectiveness of modular therapy in a diverse clinic sample using a variety of EBT practices
- Two analytic approaches:
  - Compare relative effectiveness of modular therapy and standard EBTs in current sample
  - "Benchmarking" analysis to compare modular therapy outcomes to outcomes from past research studies of EBTs

Method

Sample Characteristics

- Data were collected from a review of records for patients treated at the FSU Psychology Clinic
- Patient population had severe presentation:
  - Median number of diagnoses = 2
  - Chronic or severe symptoms common (21.0% personality disorders, 19.6% reported past suicide attempt)
  - Most patients had a history of past mental health treatment (60.7%)

Enrollment and Treatment Procedures



Types of Interventions

- CBT
- CBASP
- Behavioral Activation
- Exposure
- Motivational Interviewing
- Relaxation
- IPT
- DBT
- Problem Solving
- Social Rhythms Therapy

Selection of Outcome Measures

- Primary goal was to broadly assess improvement across a diverse sample
  - Global Assessment of Functioning (GAF)
  - Clinical Global Impressions – Severity (CGI)
- Depressive symptom outcomes on the BDI were also examined for patients with a primary depressive diagnosis

Goal 1: Comparing Outcomes for Modular Treatment to Standard EBTs

Adjusting for Group Differences

- Propensity scores model the probability of assignment to the modular versus standard EBT groups based on a variety of covariates
  - Patient severity and history
  - Demographic variables
- Propensity score weights were used to control for pre-existing differences between treatment groups (e.g. Harder et al., 2010)

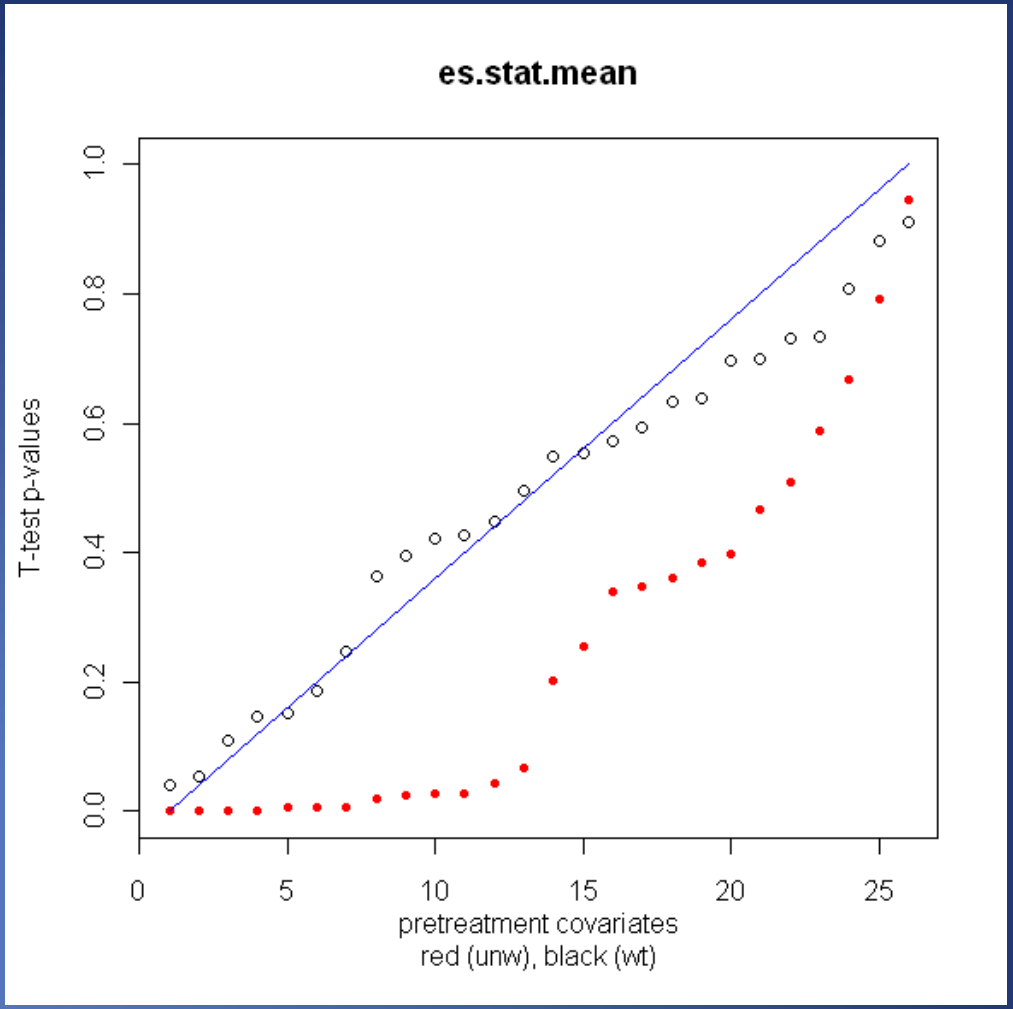
Propensity Score Procedures

- Propensity scores were calculated using the Generalized Boosted Model (Ridgeway, McCaffery, & Morral, 2006)
- Propensity weights were then assigned using the weighting by the odds procedure
- All subsequent analyses were weighted by the propensity weights

PS Weighting & Covariate Balance

- Goal of propensity score weighting is covariate balance
- Prior to weighting, the treatment groups differed significantly on 10 of 22 covariates
  - Higher clinical severity ratings, greater number of diagnoses, more history of psychiatric treatment
- Post weighting, they differed significantly on only 1 of the 22 covariates

PS Weighting & Covariate Balance



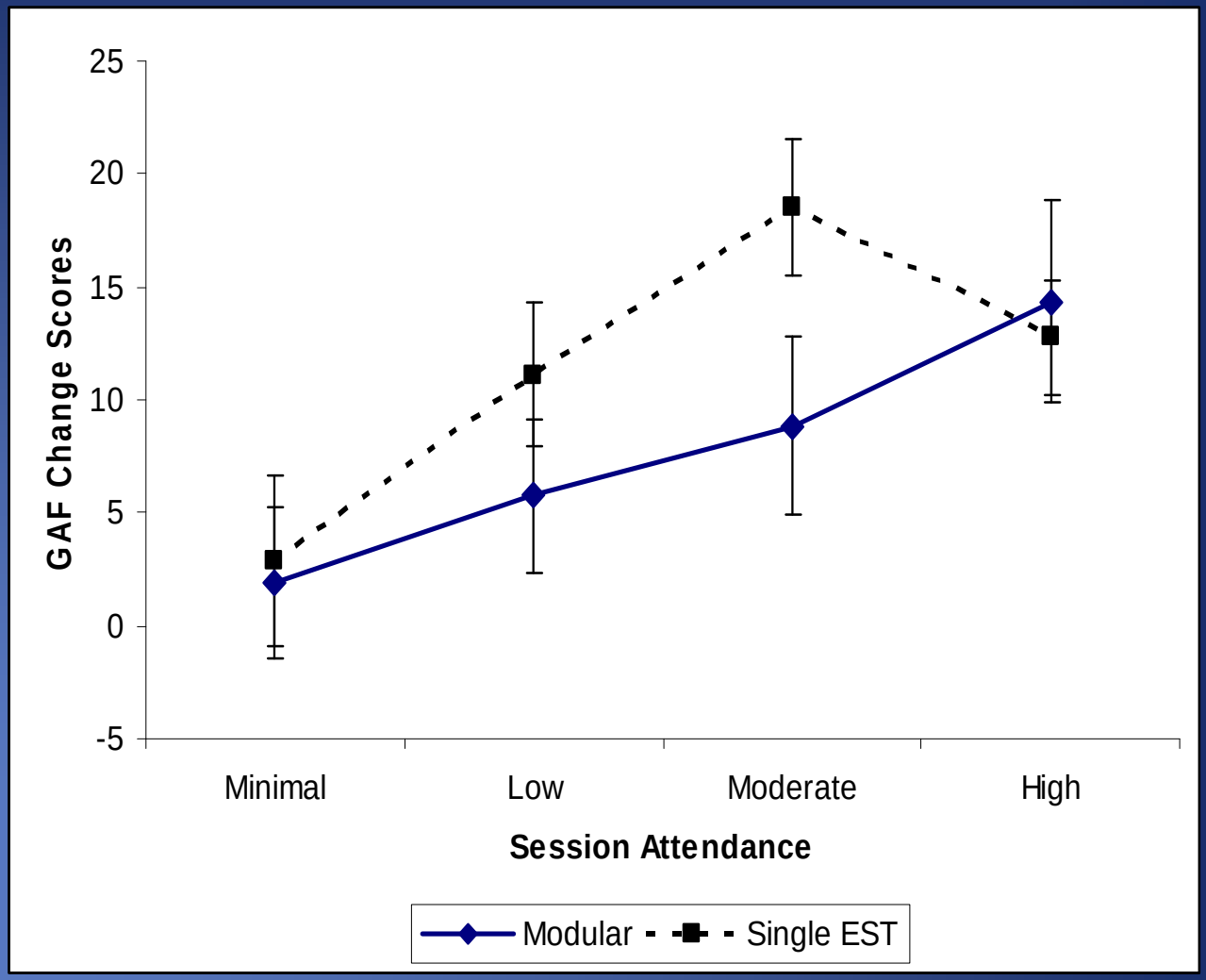
Treatment Outcome Comparisons

- Linear mixed model analyses were conducted weighting by the propensity score weights
- The treatment groups did not differ significantly on GAF or CGI outcomes
  - Mean GAF change difference = 1.45, p = .30
  - Mean CGI change difference = -.03, p = .85
- BDI data could not be examined due to small sample size and lack of balance using PS weighting technique

Treatment Course Comparisons

- Patients receiving modular treatment did attend 4.65 more sessions on average
- Exploratory analyses suggested a different form of association between attendance and outcome for the treatment groups
- A follow-up blocking analysis was conducted including blocks of 4 groups for session attendance

Session Attendance and Tx Outcomes



Conclusions

- Modular treatment sample was significantly more severe prior to propensity weighting
- Modular therapy patients showed similar improvement to standard EBT patients but had a longer course of therapy
- Modular therapy in the current sample appeared to be less effective at lower numbers of sessions

Goal 2: Comparing Outcomes for Modular Treatment to Meta-Analytic Benchmarks

Benchmarking Procedures

- Meta-analytic comparison benchmarks were calculated for the GAF, CGI, and BDI
  - Studies of each of the EBTs were reviewed
  - Only intent-to-treat (ITT) studies were included
- Effectiveness study benchmarks were also created when possible to compare to the current sample
- Two sets of benchmarks were created and compared to the current sample
  - Standardized effect size benchmarks
  - Raw difference score benchmarks

Global Improvement Outcomes

	Clinic ES	Benchmark ES		Clinic Raw Change	Benchmark Raw Change
GAF Outcomes	0.72	0.98		8.98	8.92
CGI Outcomes	-0.73	-0.96		-1.02	-1.15

- Results suggest that overall magnitude of clinical change is comparable
- Difference on standardized effect size measures is due to differences in sample variability

BDI Outcomes

	Current Clinic Sample	Efficacy Studies Benchmark	Effectiveness Studies Benchmark
Standardized ES	-1.07	-1.67	-.97
Raw Change Score	-12.97	-15.89	-10.55

- Current clinic scores were lower than all benchmarks for efficacy studies
- However, current clinic scores were comparable to effectiveness study benchmarks

Conclusions

- Modular therapy appears effective in improving outcomes
  - Therapist rated global outcomes similar to EBT benchmarks for raw change scores
  - Patient rated depression outcomes comparable to effectiveness studies of EBTs
- Standardized benchmark effect sizes from efficacy studies appear to unfairly penalize clinical setting data due to increased sample variability

General Discussion

Clinical Implications

- Modular and standard EBT approaches appear to lead to similar clinical outcomes
- Modular treatment may be associated with a longer course of treatment
- Treatment choice considerations:
  - Modular therapy may be preferred if it increases use of EBT practices
  - Standard EBTs may be preferred due to shorter course of therapy needed for same outcomes

Limitations

- Lack of random assignment: unexamined covariates may have had an impact on results
- No global patient-rated measure
- No measure of treatment adherence
- Therapists received a high level of supervision compared to community therapists

Strengths

- Large sample of patients with diverse demographic and clinical characteristics
- Patients were generally clinically severe and complex
- Modular therapists had great flexibility in treatment planning and implementation, similar to how clinicians report planning treatment

Future Directions

- Randomized trial to control for potentially non-examined covariates
- Examine the course and rates of improvement in both modular therapy and standard EBTs
- Long term studies of treatment outcomes are also needed

Thank you!