

*The Clinical Global Impressions:
a widely used instrument in psychiatry*

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Disclosure

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- I do not have any financial conflict of interest with the content of this presentation

Aims

- To review the main characteristics of the Clinical Global Impression (CGI) scales
- To discuss its strength and limitations in child psychiatry

Clinical Global Impression Scales

- Guy W. ***ECDEU Assessment Manual for Psychopharmacology.*** Rockville, MD: US Department of Health, Education, and Welfare- Public Health Service Alcohol, Drug Abuse, and Mental Health Administration, 1976.

Of the clinician, by the clinician, for the clinician

- CGI were developed as simplified global measures
- Meant to reflect the clinician's overall impression of a patient's condition
- As a way of quantify clinically relevant information

CGI-improvement scale

- 1 = Very much improved—a very substantial positive change
- 2 = Much improved—notably better with significant reduction of symptoms, but some symptoms remain
- 3 = Minimally improved—slightly better with little or no clinically meaningful reduction of symptoms. Very little change in basic clinical status, level of care, or functional capacity
- 4 = No change—symptoms remain essentially unchanged
- 5 = Minimally worse—slightly worse but may not be clinically meaningful;
- 6 = Much worse—clinically significant increase in symptoms and diminished functioning
- 7 = Very much worse—severe exacerbation of symptoms and loss of functioning

CGI -Severity

- 1 = Normal—not at all ill, symptoms of disorder not present
- 2 = Borderline mentally ill—subtle or suspected pathology
- 3 = Mildly ill—clearly established symptoms with minimal, if any, distress or difficulty in social and occupational function
- 4 = Moderately ill—overt symptoms causing noticeable, but modest, functional impairment or distress;
- 5 = Markedly ill—intrusive symptoms that distinctly impair social/occupational function or cause intrusive levels of distress
- 6 = Severely ill—disruptive pathology that affects behavior and function
- 7 = Among the most extremely ill patients—pathology drastically interferes in many life functions; may need hospital care

Efficacy Index

Therapeutic effect

Side effects

	None	Mild	Mod.	Severe
Marked	01	02	03	04
Moderate	05	06	07	08
Minimal	09	10	11	12
Unchanged or worse	13	14	15	16

CGI-S and CGI-I

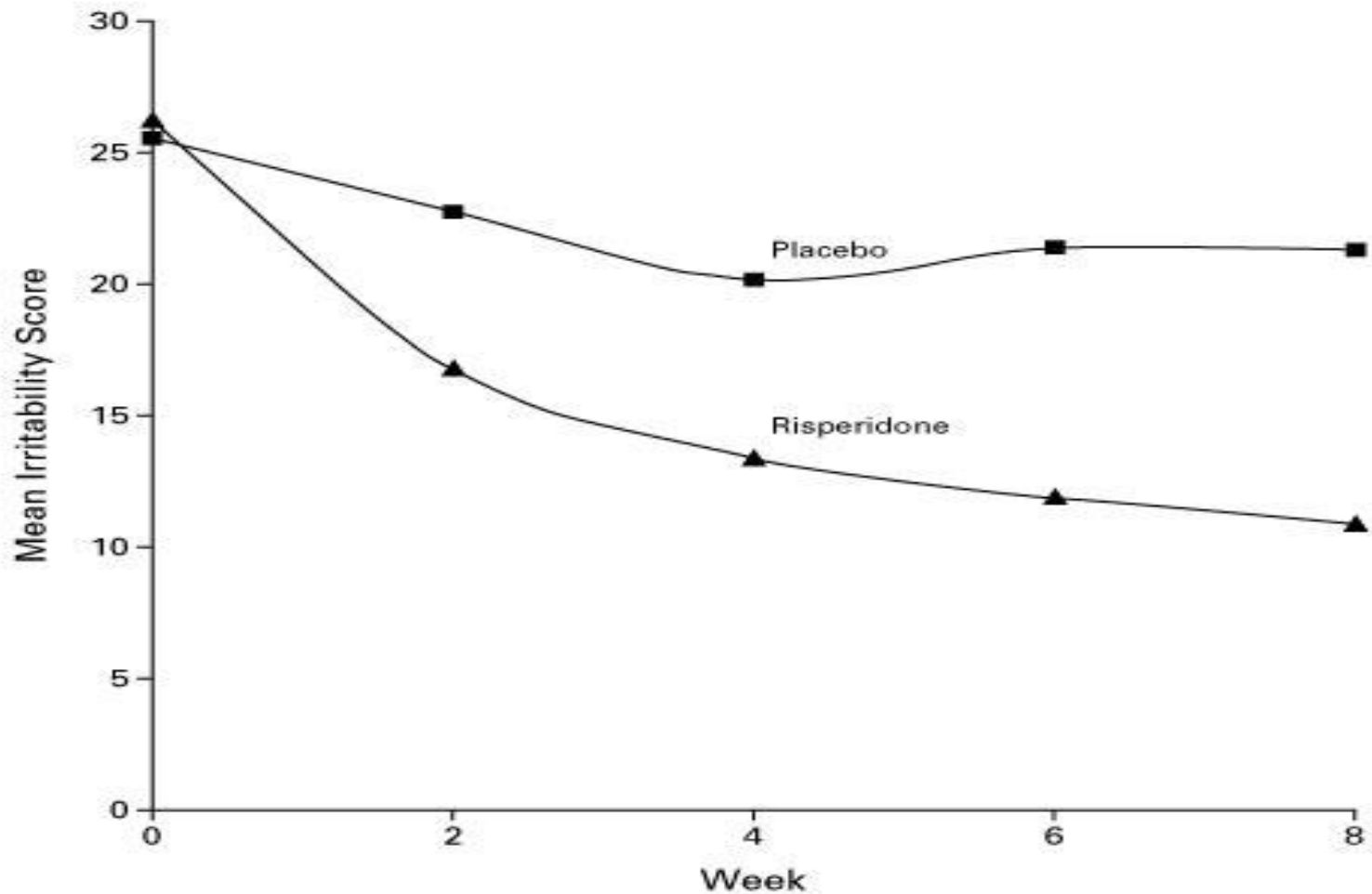
- Good internal consistency and concurrent validity
- Correlation with symptom-specific rating scales: 0.4-.07
- Primary outcome measure in clinical trials for a variety of conditions
 - major depression, social phobia, post-traumatic stress disorder, panic disorder, binge-eating disorder, bipolar, etc.

In general, good concordance between CGI and symptom rating scales

- Leucht & Engel (2006) re-analyzed the databases of four comparative effectiveness trials of antipsychotics in adults with schizophrenia (n=1,205)
 - Similar effect sizes on BPRS and on CGI-S

CGI-Improvement

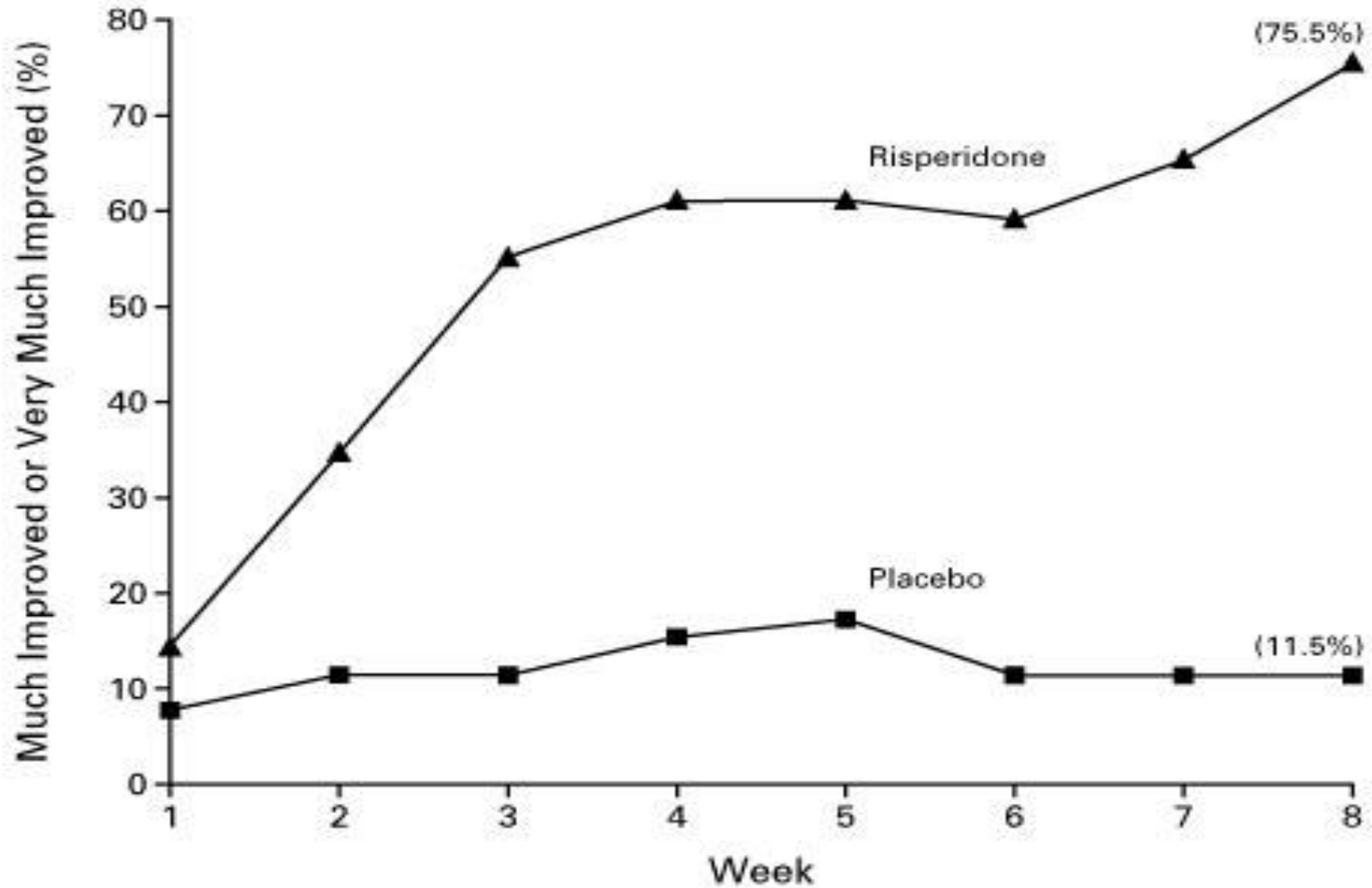
- Often dichotomized
 - Very much improved (1) or much improved (2) → IMPROVED
 - Minimally improved (3), no change (4), or worse (5-7) → NOT IMPROVED
- Forcing a clinical decision to:
 - Continue treatment as effective
 - Discontinue treatment as ineffective



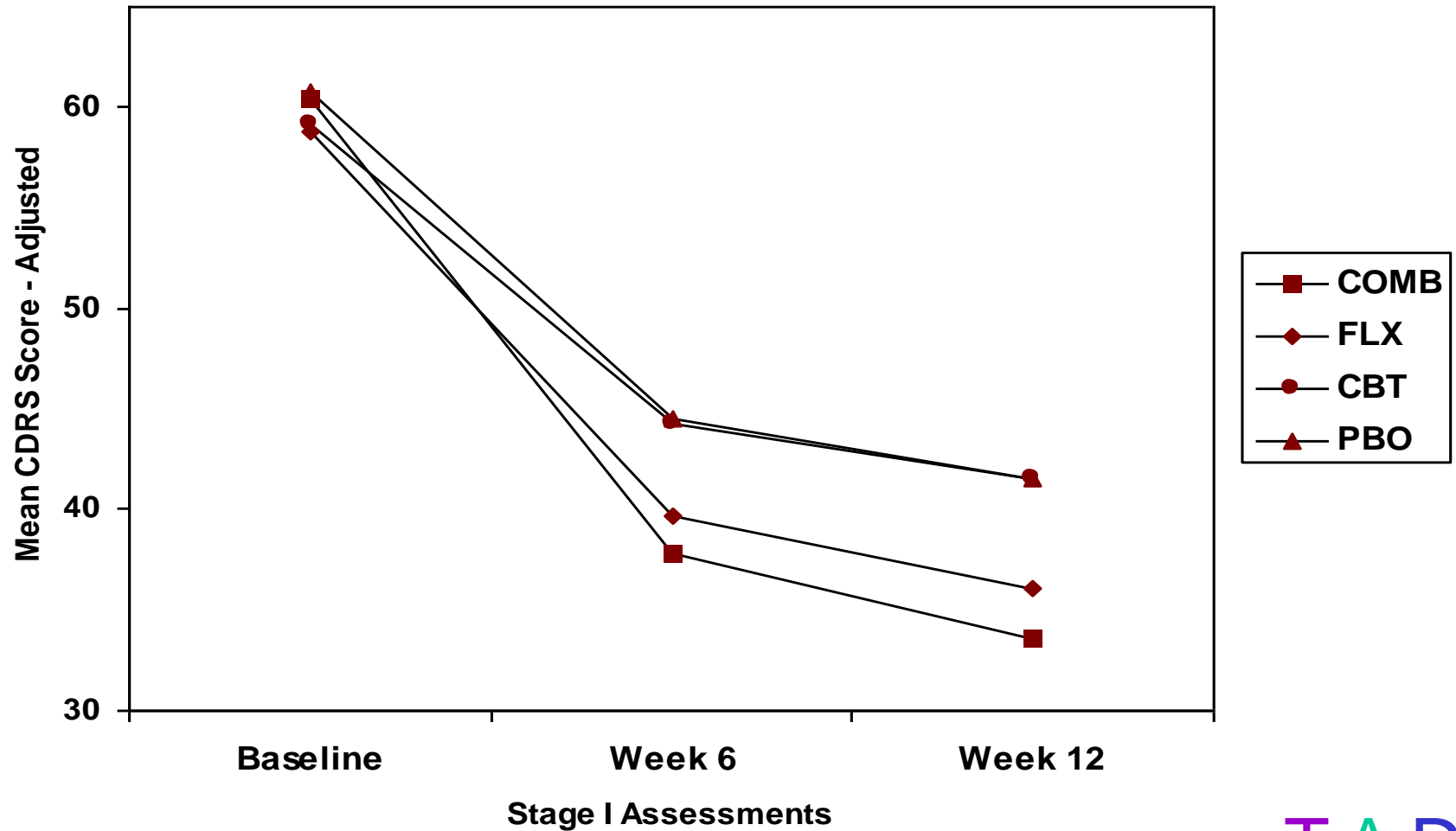
Risperidone(n=49) vs. placebo (n=52) for irritability in autism

RUPP Autism Group. N Engl J Med 2002;347:314-21.

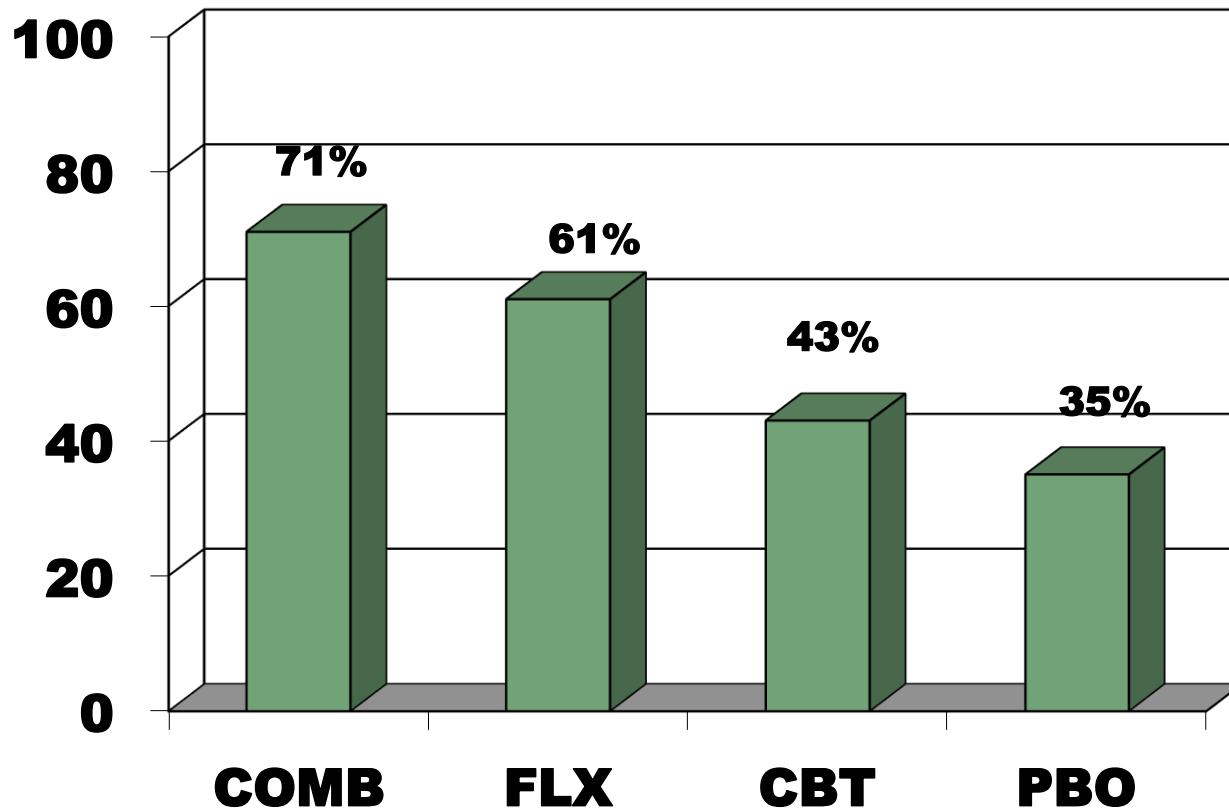
Risperidone (n=49) vs. placebo (n=52) for irritability in autism CGI-defined improvement rate



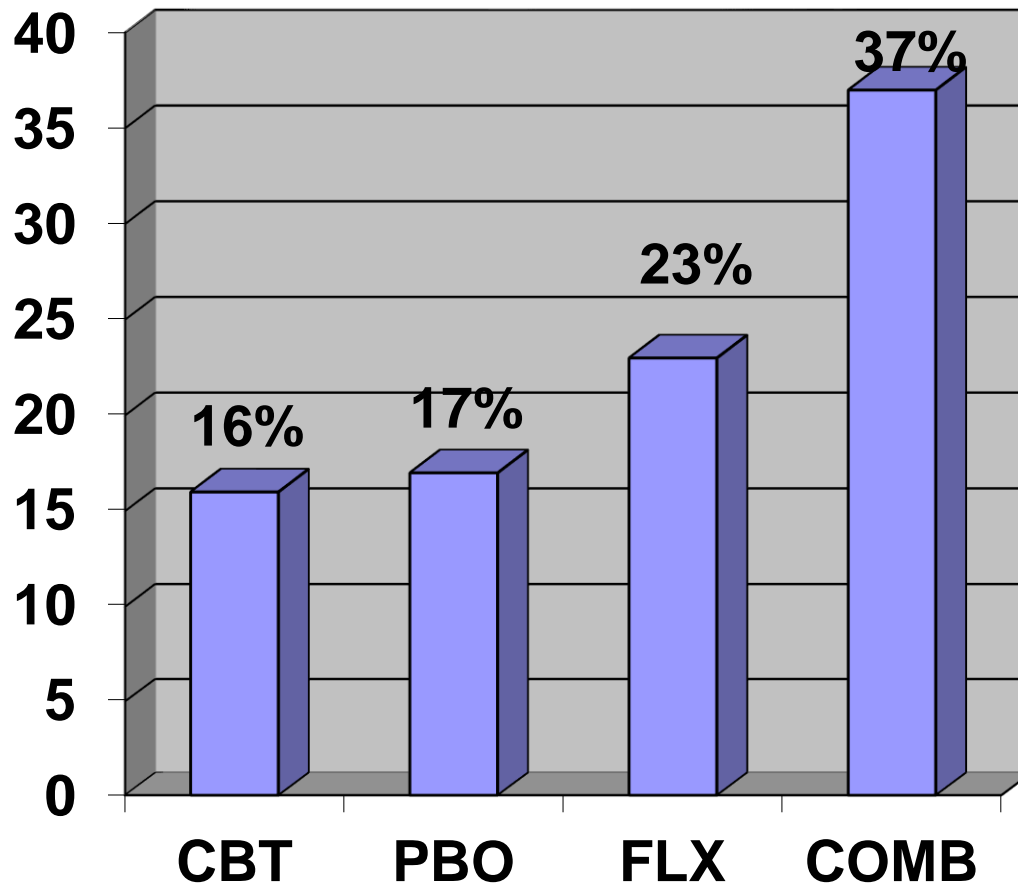
TADS, 2004



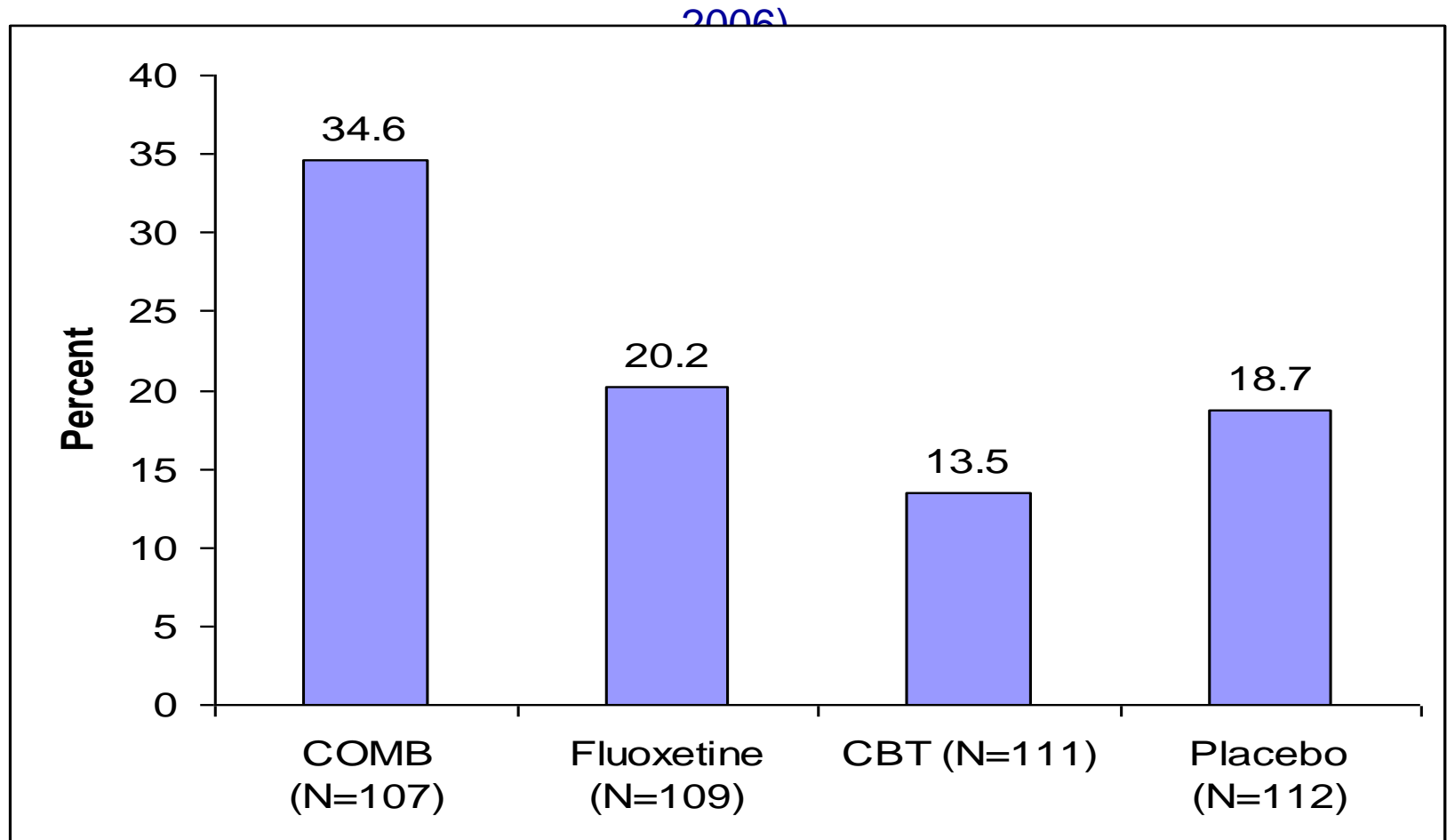
Treatment Response: Week 12



Symptomatic remission (CDRS ≤ 28) rate at 3 months (Kennard et al. 2006)



Level of functioning (CGAS ≥ 70)



CGI in clinical trials

- Often used as secondary outcome measure, together with a specific symptom rating scale
- At times, combined with a specific symptom rating scale to form a primary outcome measure
 - *Responder*: CGI=1 or 2 + $\geq 25\%$ decrease in hyperactivity scores (RUPP Network, 2005)

Methylphenidate in preschoolers with ADHD (PATS): parallel-design clinical trial (Abikoff et al 2007)

- N=114
- Age 3-5 y
- Dx: ADHD-combined or hyperactive type
- Parallel-group design
 - Methylphenidate (mean 14 mg/d) vs. placebo
- Double-blind
- 4-weeks

PATS parallel-design clinical trial (N=114):
secondary outcomes (Abikoff et al 2007)

	ES	p
SWAN Total ADHD Parent (n=86)	0.43	NS
SWAN Total ADHD Teacher (n=64)	0.32	NS
ECI depression Parent (n=61)	0.55*	.02
CGI-Severity (n=114)	0.73	.001

*Worse on medication

Disease-specific modifications of the CGI

- Application of anchor points to the CGI scores
- The anchor points direct and limit the scoring to the target symptoms of the specific disorder of the study

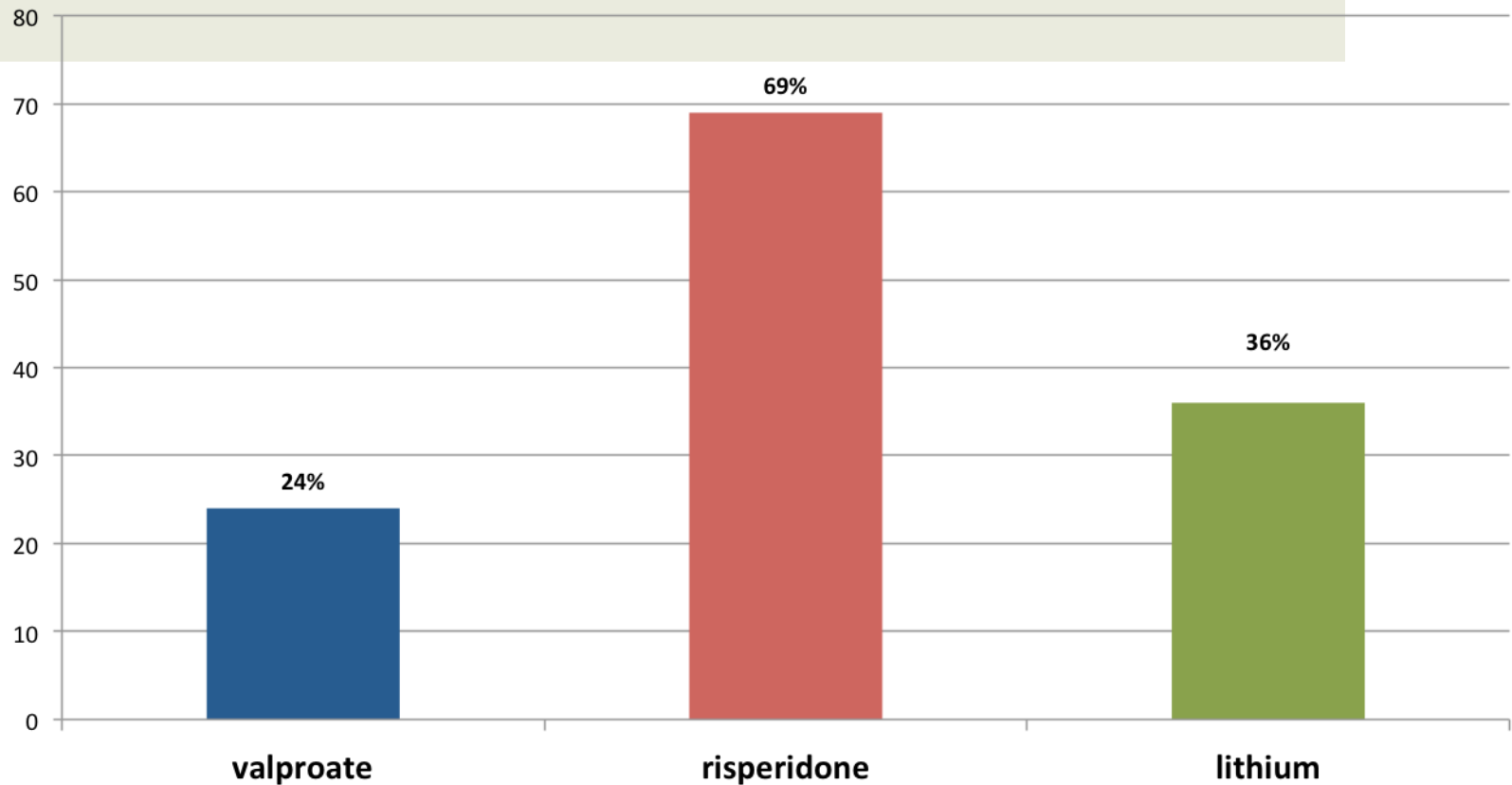
CGI-BP

Spearing MK, Post RM, Leverich GS, Brandt D, Nolen W.

Modification of the Clinical Global Impressions (CGI) Scale for use in bipolar illness (BP): the CGI-BP.

Psychiatry Res. 1997;73(3):159-71

Improvement rate in the Treatment of Early Age Mania (TEAM) (N=279) (Geller et al., 2012)



CGI

Strengths

- Global: overall index
- Transdiagnostic
- Widely used
- Quick to rate
- Low burden on patient's and clinician's time
- Convenient for use in practical trials

Limitations

- Global: lack specificity
- Needs clinical expertise and appropriate knowledge of the patient situation
- Not explanatory