# Introduction to Medical Psychology
# Lecture 13: Behavioral Intervention

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**https://youtu.be/ZUR9FBUVpn0**

**Lecture video at above link.**

# Today: Behavioral Intervention

→ Forms of psychotherapy

→ Example: SORKC model

# “Schools” of psychotherapy

There are several different schools of psychotherapy. The main approaches are:

- Psychoanalysis and psychodynamic therapies

- Humanistic-experiential therapy
  (client-centered therapy)

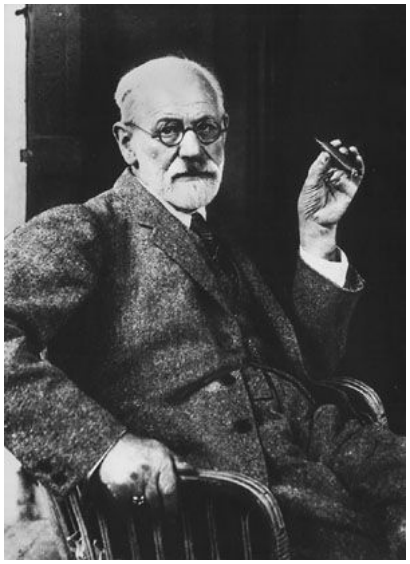
- Behavior therapy
- Cognitive-behavioral therapy (CBT)

# School 1:
# Psychoanalysis / Psychodynamic theory

Psychoanalysis focuses on early child development,
in particular **sexual development**, **personality** (key components: id, ego, superego), and the **relationship** to key care-taking persons (parents).

Many of our drives and thoughts are unconscious and can lead to intrapsychic conflicts -> neurosis.
Unconscious ego-defense mechanisms (displacement, repression, fixation, regression, etc.) keep these intrapsychic conflicts unconscious, because they might be threatening for us.

Main objective is to make the unconscious intrapsychic conflicts conscious, to work on them, and to resolve them (or at least acknowledge them).



Sigmund Freud
1856-1939

Example: a middle-aged man feels like a complete failure and attempts suicide. Psychoanalysis reveals that he adored and at the same time hated his extremely successful and overly critical father and tried to kill him by killing himself.

# Psychoanalysis / Psychodynamic 2

Later generations of psychodynamic therapies focused less on sexual development, but on:

- the “ego” as control instance of drives (**ego psychology**: Anna Freud)

- **object-relations**: relations with other people and their symbolic representation in themselves (introjection: a son might internalize the father’s image) (Margaret Mahler)

- **interpersonal relations**: how we build up trust and whether we feel to belong to a group (Alfred Adler, Erich Fromm, Erik Erikson)

- **attachment**: how we experience our first relations with our primary care-givers (e.g., parents) determines our functioning and social behavior later (John Bowlby)

# School 2: Humanistic-Experiential Theory

Humanistic therapies believe that humans are good by nature and aim at allowing people to fulfill themselves – to self-actualize.

Inspired by the horrors of the 20th century (e.g., Viktor Frankl: Man's search for meaning), its alienation, depersonalization, loneliness, and lack of meaning, humanistic psychology states that people have the freedom and responsibility to control their own behavior.

Carl Rogers
(1902-1987)

Humanistic therapies are non-directive, they do not interpret, judge, or guide the patient.
By **acceptance** of the patient as a human, **authenticity** of the therapist, and **empathy**, the patient is to explore his/her own feelings, thoughts and wishes. This should lead the patient to expand their freedoms to choose for themselves how to live.

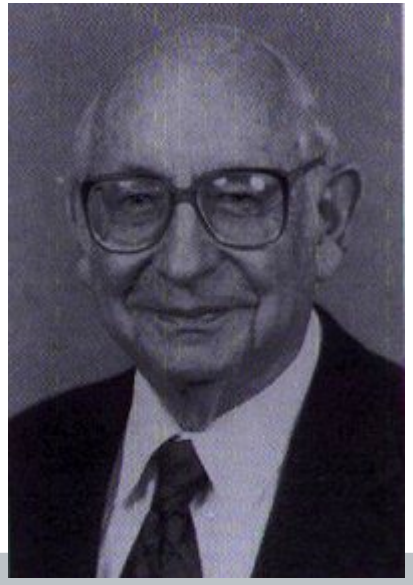
# School 3:
# Behavior Theory

Behavior therapy understands psychological disorders as maladaptive learning, due to classical conditioning, instrumental conditioning or observational learning.

This learned maladaptive behavior can be corrected by
- extinction (of a classical conditioning, e.g. exposure)
- aversion therapy (punishment)
- establishing functional behavior (e.g., social skill learning).

Joseph Wolpe (1915-1997)

famous for systematic desensitization



Burrhus F. Skinner (1904-1990)

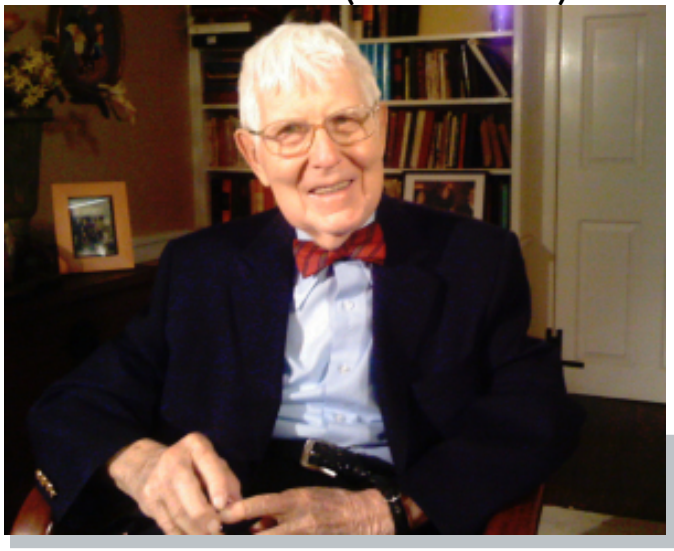
# School 4:
# Cognitive-Behavioral Therapy (CBT)

While behaviorism (the theory underlying behavior therapy) focuses on observable behavior, therapists in the 1970s started to acknowledge the effect of cognition (thoughts, evaluations, perceptions, self-statements) on our emotions and well-being.

For example, in cognitive therapy dysfunctional beliefs about external events and oneself are central:

- All-or-none reasoning
- Selective abstraction: focus on negative details
- Arbitrary inference

Aaron T. Beck (born 1921)



- Self-schemas: beliefs how we (e.g., as men, women, students, academics, etc.) should behave.

A therapy's task is to question and change these beliefs when they are distorted or impeding our freedom.

# Strategy for organizing therapy: SORKC

SORKC model by Kanfer and Saslow (1965):

In behavior therapy, psychological problems and mental disorders are understood as learned problematic behavior (maladaptive behavior) rather than clinical categories (e.g., depression or obsessive compulsive behavior).

The SORKC model provides a framework to understand this behavior and find target points for intervention.

S: Stimulus
O: Organism variables
R: Reaction
K: Contingency
C: Consequence

# Case Study

Exemplary case study:

On one day, Ms L. (25 year old law school student) has spent 8 hours sun-bathing at the lake. On her way back on the bus, the stuffy air in this crowded bus made her feel sick and she fell unconscious.
Since that time her life has changed: she is afraid of going inside a department store, cinema or theater, because she thinks she might faint again. Rather than taking the bus she walks – even long distances.
When she gets into a crowded room, she starts feeling fear that she might faint again, that this might cause a disturbance to the others. She starts sweating and her heart is beating faster.
She misses many of her university courses, because she would have to be together with 200 other students in one room.

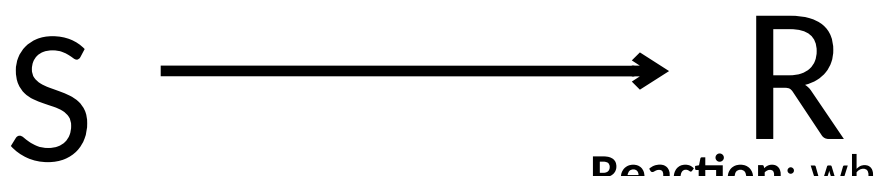
# SORKC

R

**Reaction**: what is the problematic behavior?

R (motor): avoid crowds
R (emotional): fear
R (physiological): sweat, increased heart rate
R (cognitive): "I might cause trouble"

# SORKC




**Stimulus**: when does the problematic behavior occur?

Crowded, confined spaces

**Reaction**: what is the problematic behavior?

R (motor): avoid crowds
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# SORKC


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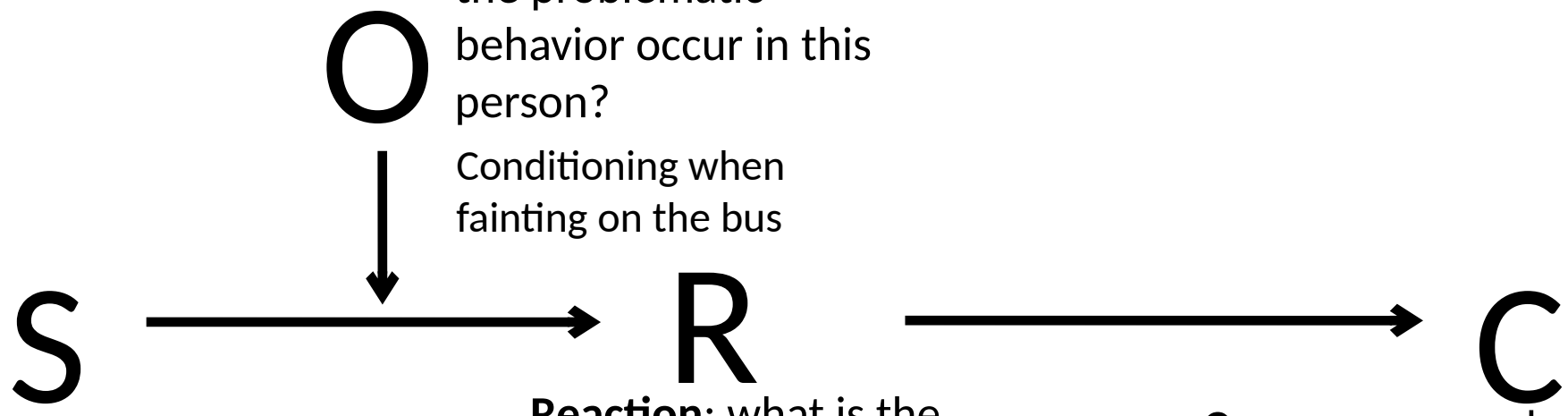
**Consequence**: what happens when the problematic behavior occurs?

-Fear reduction (negative reinforcement)
-long-term: impairments in social and academic functioning

# SORKC




**Organism**: why does the problematic behavior occur in this person?

Conditioning when fainting on the bus

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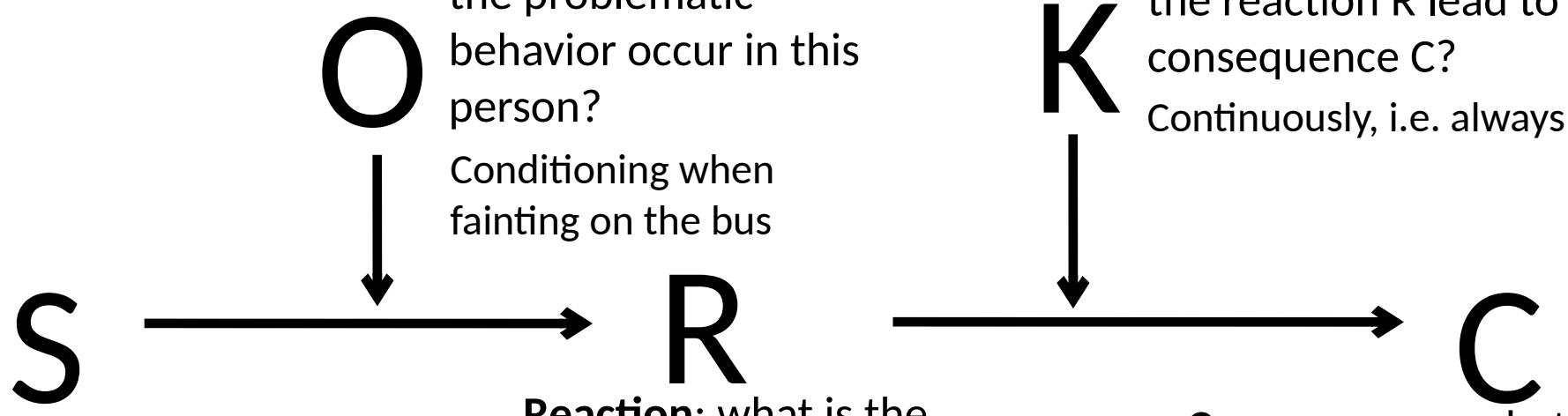


**Organism**: why does the problematic behavior occur in this person?

Conditioning when fainting on the bus

**Contingency**: when does the reaction R lead to consequence C?

Continuously, i.e. always

**Stimulus**: when does the problematic behavior occur?

Crowded, confined spaces

**Reaction**: what is the problematic behavior?

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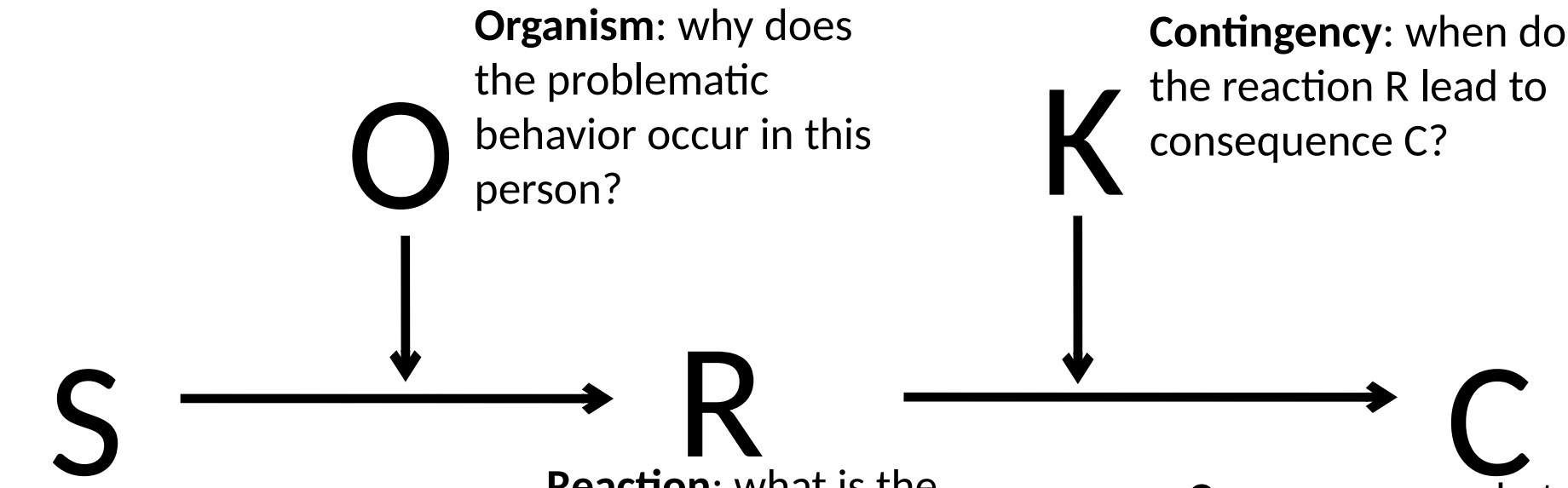
# SORKC

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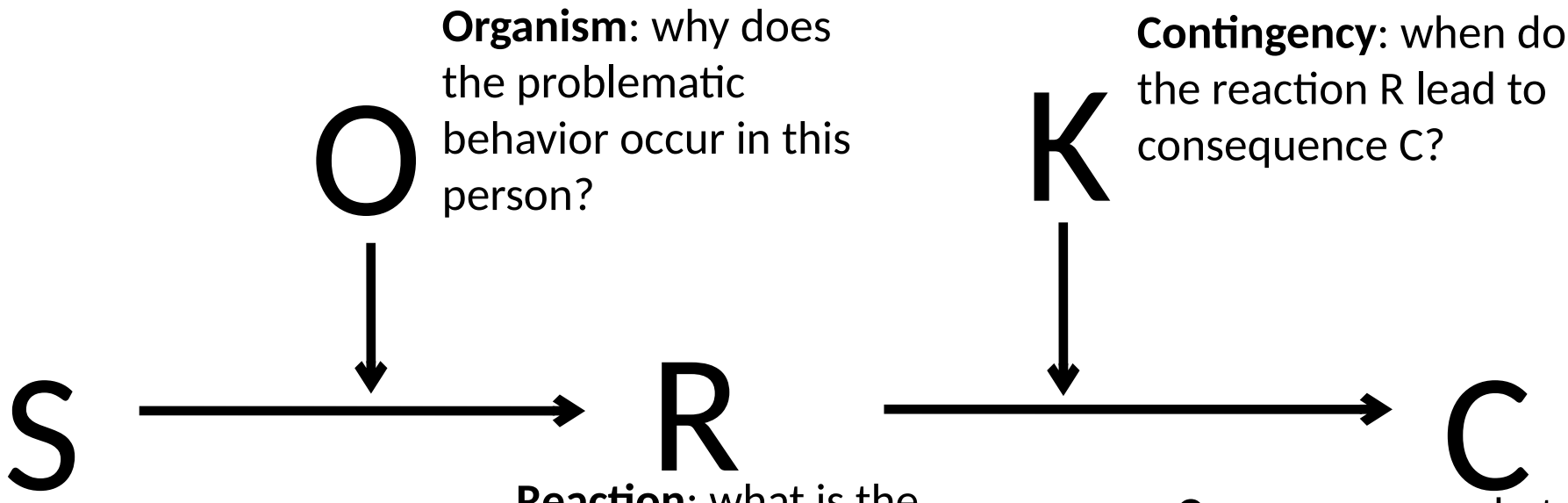
# SORKC → Strategy

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**Stimulus**: when does the problematic behavior occur?

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**Consequence**: what happens when the problematic behavior occurs?

Strategy for behavior therapy: extinction/relearning of relationship between S and R → exposure of Ms L. to confined crowded spaces to relearn that these situations do not always result in fainting and "causing trouble".

# Case 1

Mrs. B suffers from sleep problems for weeks. She just cannot fall asleep anymore and stays awake until late (2-3 am in the morning). When awake she thinks of problems in her job or in her relationship. Sometimes she reads in bed when awake. During daytime she tends to be so tired that she has to take naps (around 1-2 hours). She can't work very efficiently and she is rarely able to go shopping or do household chores. Her husband has more and more taken over her duties recently.

# Case 2

T. is a boy, 10 years old, and he still sometimes wets his bed during the night. His parents scold him for this and lament the soiled sheets and cannot believe that their son still wets his bed. They often talk about their niece who stopped wearing diapers from 13 months of age. Many discussions in the family, in particular with parents, grandmothers, and T.'s aunts circle around this topic. T. finds that all very embarrassing.

# Case 3

Ms. C is 20 years old and works as a nurse in training. Since teenage years she has always been concerned about her weight, she always felt plump and was afraid to gain more weight, even though she was always in a normal range (BMI: 22-24 $kg/m^2$).

She fought weight gains with diets and challenging exercise regimens. For half a year, after her boyfriend split up, she often binge eats in the evening when she is stressed (potato chips, ice cream, etc.). After these binges she feels very guilty and makes herself vomit and sometimes uses laxatives.

# Case 4

Mr. K (43 years old, works at an IT company) smokes 40 cigarettes a day. He is aware that smoking poses a threat to his health, and two of his uncles have died of lung cancer. However, his daily routine causes considerable stress and the cigarette breaks provide him with some time to “clear his head”. He wants to quit because he already has some chronic bronchitis, but all his attempts did not last more than 2 weeks.

# Effectiveness of Therapy: Depression

**Design:** Random assignment to one of the following: 16 weeks of medications (n=120), 16 weeks of cognitive therapy (n=60), or 8 weeks of pill placebo (n=60).

**Patients:** Two hundred forty outpatients, aged 18 to 70 years, with moderate to severe major depressive disorder.

For moderate to severe depression, cognitive therapy and medication can be effective (in this study partly even up to 16 weeks).

HDRS: Hamilton depression rating scale
Score <7: normal
Score >20: moderate to severe

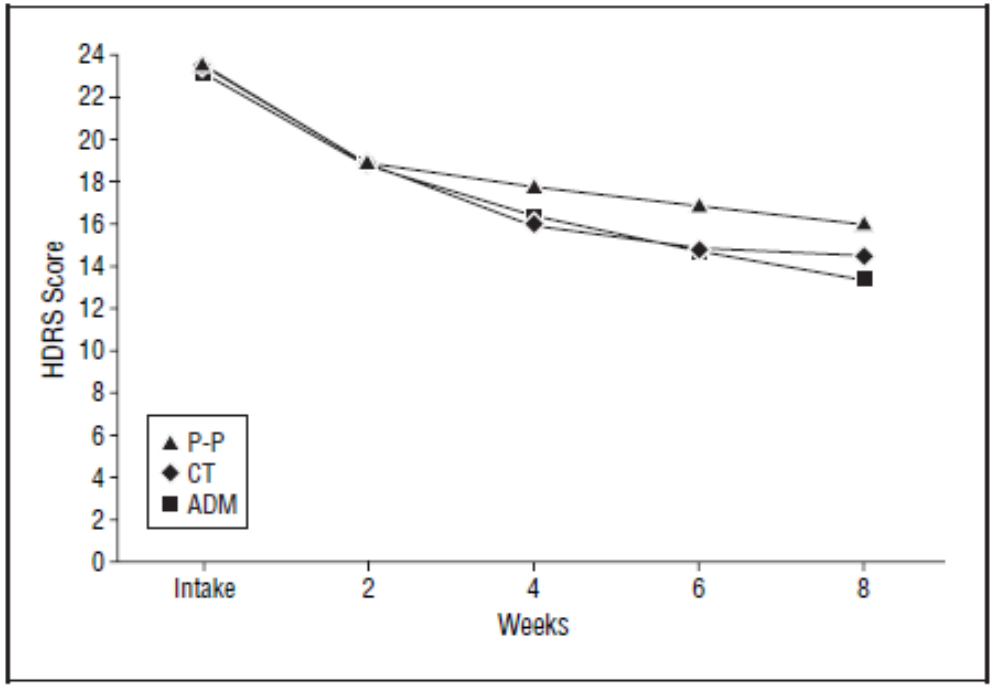


**Figure 1.** Biweekly Hamilton Depression Rating Scale (HDRS) scores during the first 8 weeks of acute treatment. ADM indicates antidepressant medication therapy (n=120); CT, cognitive therapy (n=60); and P-P, pill placebo (n=60).

Rubeis et al., Archives of General Psychiatry, 2005

# Effectiveness of Therapy: Depression

**Objectives:** To study the relationship between adherence to use of and efficacy of antidepressant drugs plus psychological treatment vs drug treatment alone in depressive disorders.

In a meta-analysis (932 patients), combined treatment of psychological treatment + drugs was better than pharmacotherapy alone: Odds ratio = 1.86

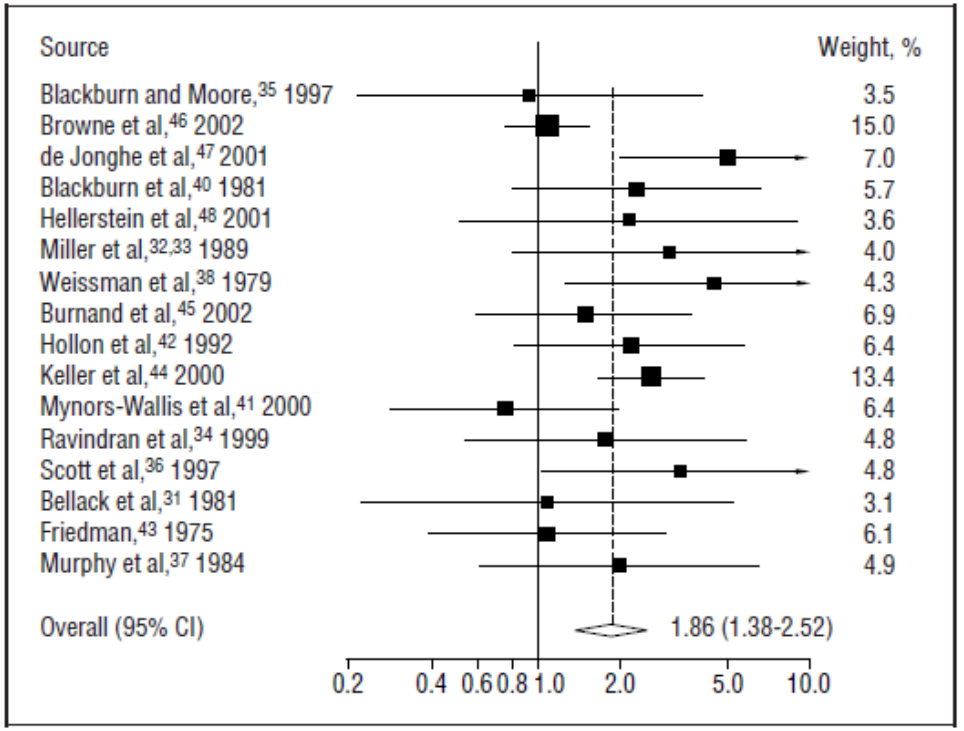


**Figure 1.** Odds ratios of response and corresponding 95% confidence intervals (CIs). Odds ratios greater than 1.00 indicate a higher response rate in the combined treatment.



Pampallona et al., Archives of General Psychiatry, 2004

# Summary

Forms of Psychotherapy:

- Psychoanalysis and psychodynamic therapies
- Humanistic-experiential therapy (client-centered therapy)
- Behavior therapy
- Cognitive-behavioral therapy (CBT)

Behavior analysis (in behavior therapy / CBT):

S: Stimulus
O: Organism variables
R: Reaction
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