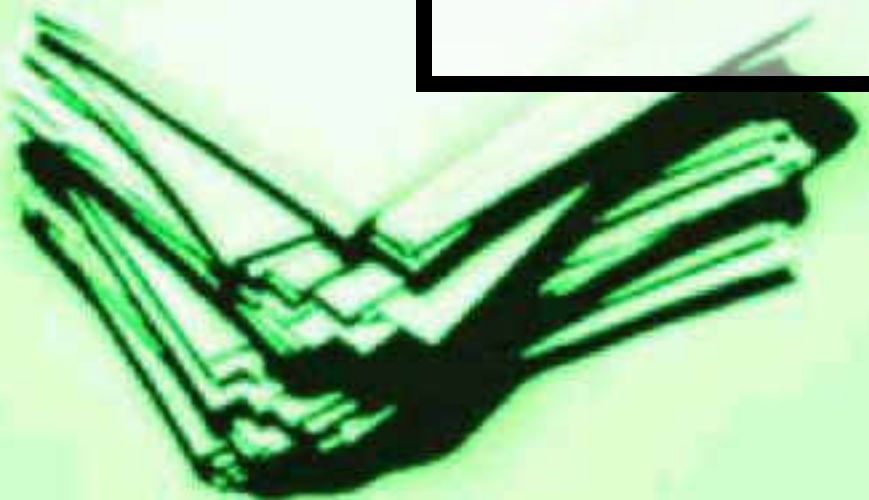
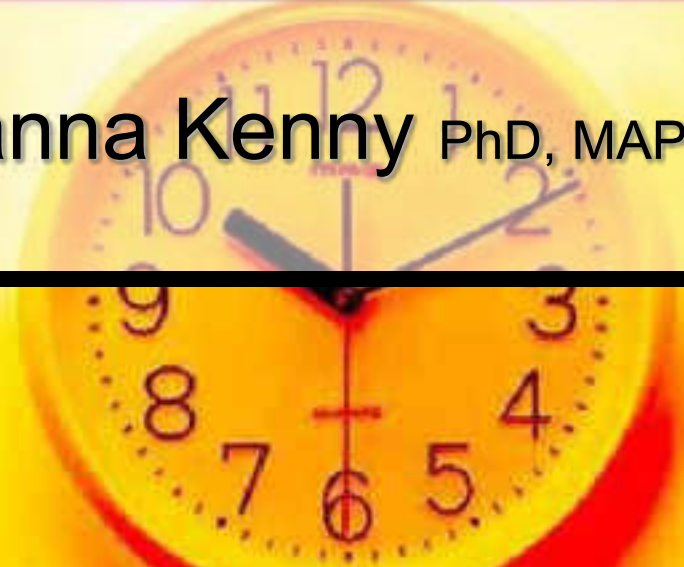
Evidence-based psychiatry and psychotherapy: What works?

Presentation to National Association of Practising Psychiatrists
15 February 2022

Professor Dianna Kenny PhD, MAPsS





What have we learned from history? Have times changed?

- If I were to have stood before a learned gathering of my peers and colleagues 100-150 years ago, what methods or products would I have presented to you as efficacious in the treatment of a range of disorders, including low mood, pain, anxiety, insomnia, cough or toothache?

Cocaine drops for toothache

- Very popular for children in 1885
- Not only did cocaine relieve the pain, it made children very happy!

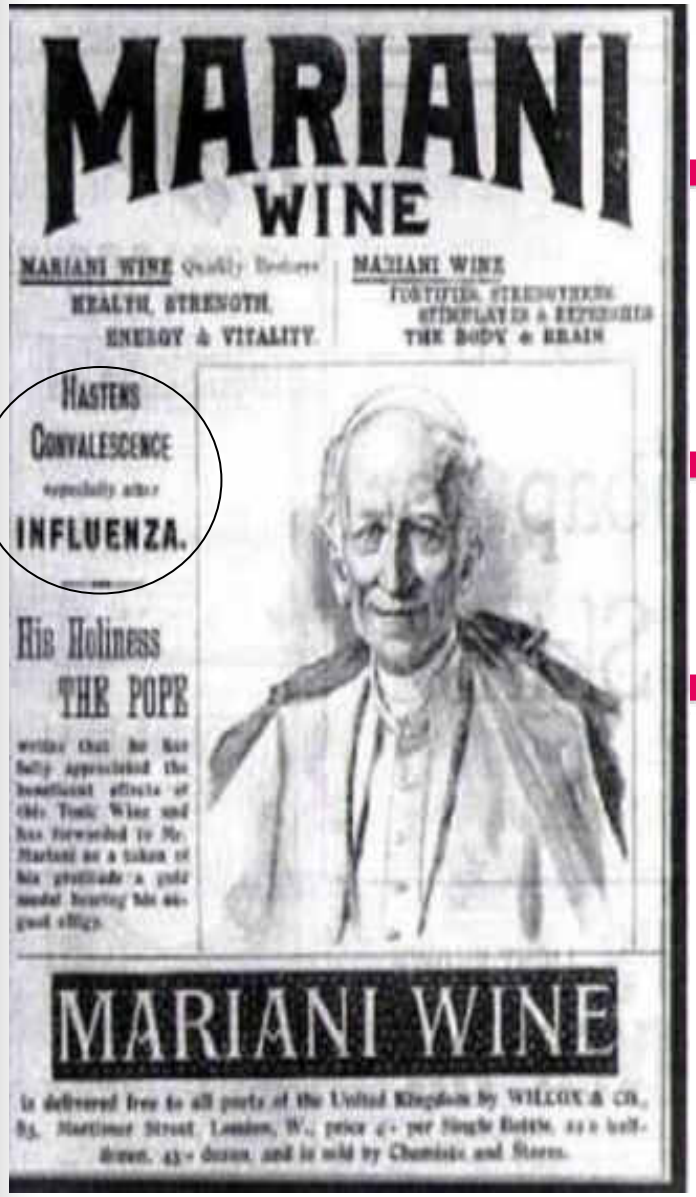
A bottle of Bayer's 'Heroin'

- Between 1890 and 1910 heroin was sold as a non-addictive substitute for morphine
- It was also used to treat children with a cough

Metcalf's Coca Wine

- This was one of a huge variety of wines containing cocaine on the market
- **It was widely advertised to improve mood!**
- It also doubled as an ubiquitous medicinal treatment

Mariani wine (1875)



- Mariani wine was the most famous Coca (cocaine-based) wine of its time
- Pope Leo XIII used to carry a bottle with him at all times
- He awarded Angelo Mariani, the wine's producer, with a Vatican gold medal (perhaps because the wine made him feel better than his religion?)

Cocaine Tablets (1900)

- Very popular among stage actors, singers, teachers, and preachers, used to ensure an optimal performance by managing performance anxiety.
- Great to 'smooth' the voice, because of its “antiseptic” and “anaesthetic” properties

Opium for newborns

46% alcohol

1 3/16 grains Opium to each fluid ounce

This product was an excellent soporific – Opium with 46% alcohol! Used to soothe colicky and hard-to-settle babies (a swig or two for the parents was also welcome!)

Progress?

- Why have we stopped
  - prescribing heroin for pain relief?
  - putting cocaine in wine?
  - treating asthma with opium?
  - treating toothache, depression and performance anxiety with cocaine?
  - giving opium to newborns?

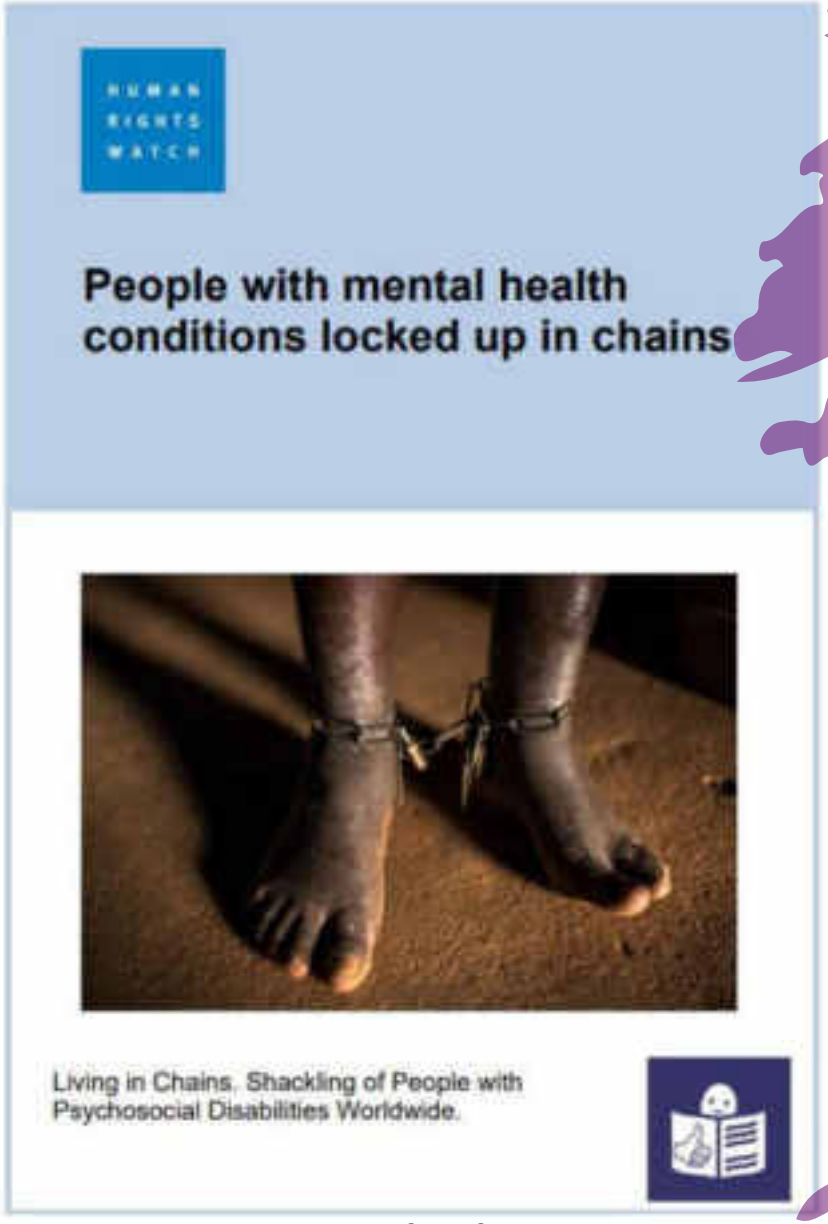
Why have we stopped shackling people with mental disorders?

Pitie-Salpêtrière Hospital in Paris, 1795
Dr Philippe Pinel, chief physician and founder of modern psychiatry

Shockingly, we haven't!!

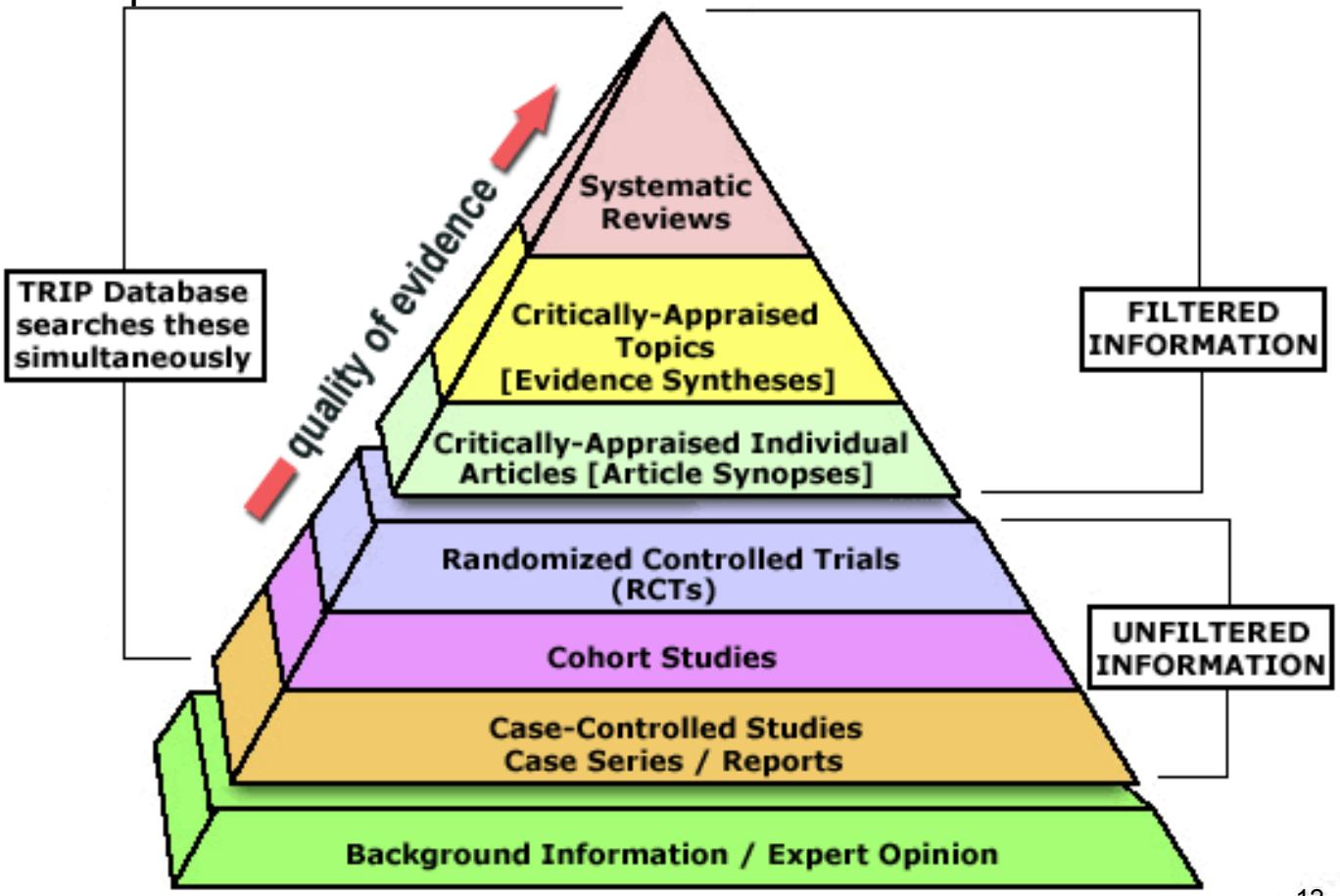
Kept in chains: People with mental illness shackled in 60 nations

https://www.aljazeera.com/features/2020/10/10/rights-group-mentally-ill-shackled-and-chained-worldwide



https://www.hrw.org/sites/default/files/media_2020/10/global_shackling1020_ETR.pdf

Purportedly, we now have evidence-based medicine, robust research methods, independent oversight, transparency…an understanding of side effects, ethics, and replication to help us select efficacious treatments but our professional bodies misuse the science for political or unconscious reasons.



EBM Pyramid and EBM Page Generator, © 2006 Trustees of Dartmouth College and Yale University. All Rights Reserved. Produced by Jan Glover, David Izzo, Karen Odato and Lei Wang.

We are currently grappling with a schism in opinion regarding psychiatric treatment.

Profound differences in theory are never gratuitous or invented. They grow out of conflicting elements in a genuine problem.

John Dewey. In Dworkin, M. (1959). *Dewey on Education* pp. 20, 91

Historical origins of the schism in the current debate

- **From consciousness → conditioning**
  - Ivan Pavlov's "conditioned reflex" and John B Watson's "behaviourism" ~1913 - reaction against the philosophical (i.e., introspective) origins of psychology and reliance on "subjectivism."
  - Fenichel's statistical report (1930) on psychoanalytic psychotherapy outcomes at Berlin Psychoanalytic Institute (1920 to 1930)
  - Freud's despondency about his "interminable therapy"

Historical origins of the schism in the current debate

- Eysenck (1952) → psychotherapy not effective

  (hopelessly flawed study but VERY INFLUENTIAL)

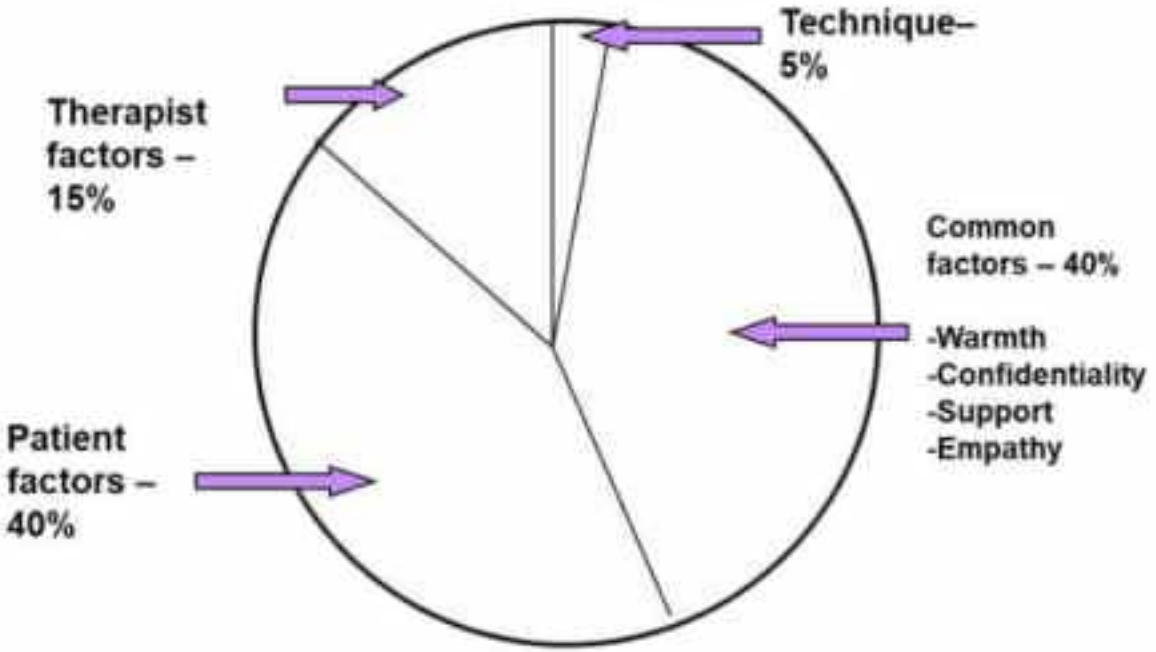
- B F Skinner - operant conditioning (1950s) – the basis of cognitive – behaviour therapy.

Backlash

- Hadley Cantril,1956
  - in the brief history of his science the subject of man as a living, striving, anxious, hopeful, curious, valuing, prayerful organism has been somewhat neglected (p. 3).
- Gordon Allport,1955
  - we need to transcend the limitations of a psychology of species, and develop a more adequate psychology of personal growth
- Perhaps these comments are equally pertinent to the biological psychiatrist of today…?

Historical origins of the schism in the current debate

- **From meaning-making to medication**
  - **Prozac** (1974) → Biological psychiatry
- Smith, Glass and Miller (1980) → birth of meta-analysis: psychotherapy effective; but therapists, not methods effective



Historical origins of the schism in the current debate

- Aaron Beck and the DSM-111 (1980) → primacy of diagnosis, new disorders, treatment of symptoms, not person.
- Advent of learning theory based therapies (BT, CT, CBT)
- Focus on short term interventions
- Focus on manualized therapies
- Focus on medication
- New wave of methodologically sophisticated research

Looking forward

- Effectiveness vs efficacy (Seligman, 1995) – Patient perception of therapy best indicator of outcome (Lambert, 2006) cf Fenichel (1920-1930)
- Publication bias and "big pharma"
  - Depression studies
  - CBT studies
  - Neglect of adverse outcomes in all forms of therapy
  - Problem of dropout
  - Inclusion of "single diagnoses" patients in RCTs don't match clinical cases
- Steady march of new, competitive, and alternative theories and therapies – the third wave of CBT – mindfulness, DBT, ACT; third wave of psychoanalytic therapies (experiential, existential, attachment-informed, ISTDP, relational, mentalization-based)
- Advent of brain-based therapy and rise of neuropsychiatry/neuro-psychotherapies

Are psychoanalytically oriented psychotherapies effective?

If so, which ones?

Long vs short term? Both?

If so, for which condition? Which patient?

Table 2. Effect Sizes of STPP, CBT, Other Forms of Psychotherapy, TAU, and Waiting-List Controls

Treatment/Control Group	No. of Studies	Effect Size Mean (SD)	Effect Size Range
STPP			
Target problems (pre-post)	17	1.39 (0.83)	0.21 to 3.60
Target problems (pre-fu)	16	1.57 (0.88)	0.40 to 3.60
General psychiatric symptoms (pre-post)	15	0.90 (0.48)	0.41 to 1.90
General psychiatric symptoms (pre-fu)	13	0.95 (0.50)	0.32 to 1.80
Social functioning (pre-post)	11	0.80 (0.37)	0.20 to 1.55
Social functioning (pre-fu)	8	1.19 (0.72)	0.50 to 2.75
CBT			
Target problems (pre-post)	11	1.38 (0.49)	0.47 to 2.21
Target problems (pre-fu)	9	1.33 (0.41)	0.81 to 1.96
General psychiatric symptoms (pre-post)	10	1.04 (0.52)	0.38 to 1.81
General psychiatric symptoms (pre-fu)	8	0.97 (0.63)	0.23 to 1.86
Social functioning (pre-post)	8	0.92 (0.29)	0.45 to 1.31
Social functioning (pre-fu)	5	1.05 (0.39)	0.37 to 1.36
Other psychotherapies			
Target problems (pre-post)	9	1.14 (0.79)	0.07 to 2.00
Target problems (pre-fu)	9	1.13 (0.88)	−0.10 to 2.14
General psychiatric symptoms (pre-post)	8	0.82 (0.84)	0.07 to 2.80
General psychiatric symptoms (pre-fu)	8	0.74 (0.88)	−0.12 to 2.80
Social functioning (pre-post)	4	1.10 (1.15)	0.37 to 2.80
Social functioning (pre-fu)	4	0.79 (1.16)	0.00 to 2.80
TAU			
Target problems (pre-post)	3	0.55 (0.56)	0.19 to 1.20
Target problems (pre-fu)	3	0.84 (0.78)	0.20 to 1.71
General psychiatric symptoms (pre-post)	1	0.22	0.22
General psychiatric symptoms (pre-fu)	1	0.24	0.24
Social functioning (pre-post)	1	0.38	0.38
Social functioning (pre-fu)	1	0.95	0.95
Waiting list			
Target problems (pre-post)	4	0.27 (0.33)	0.00 to 0.72
Target problems (pre-fu)		NA	NA
General psychiatric symptoms (pre-post)	4	0.12 (0.13)	−0.04 to 0.24
General psychiatric symptoms (pre-fu)		NA	NA
Social functioning (pre-post)	2	0.21 (0.23)	0.04 to 0.37
Social functioning (pre-fu)		NA	NA

Abbreviations: CBT, cognitive-behavioral therapy; NA, not available; pre-fu, ...therapy vs follow-up assessments; pre-post, pretherapy vs posttherapy

Short-term psychodynamic psychotherapy (<40 sessions) yielded significant and large pre-treatment-posttreatment effect sizes for
-target problems (1.39),
-general psychiatric symptoms (0.90), and
-social functioning (0.80).

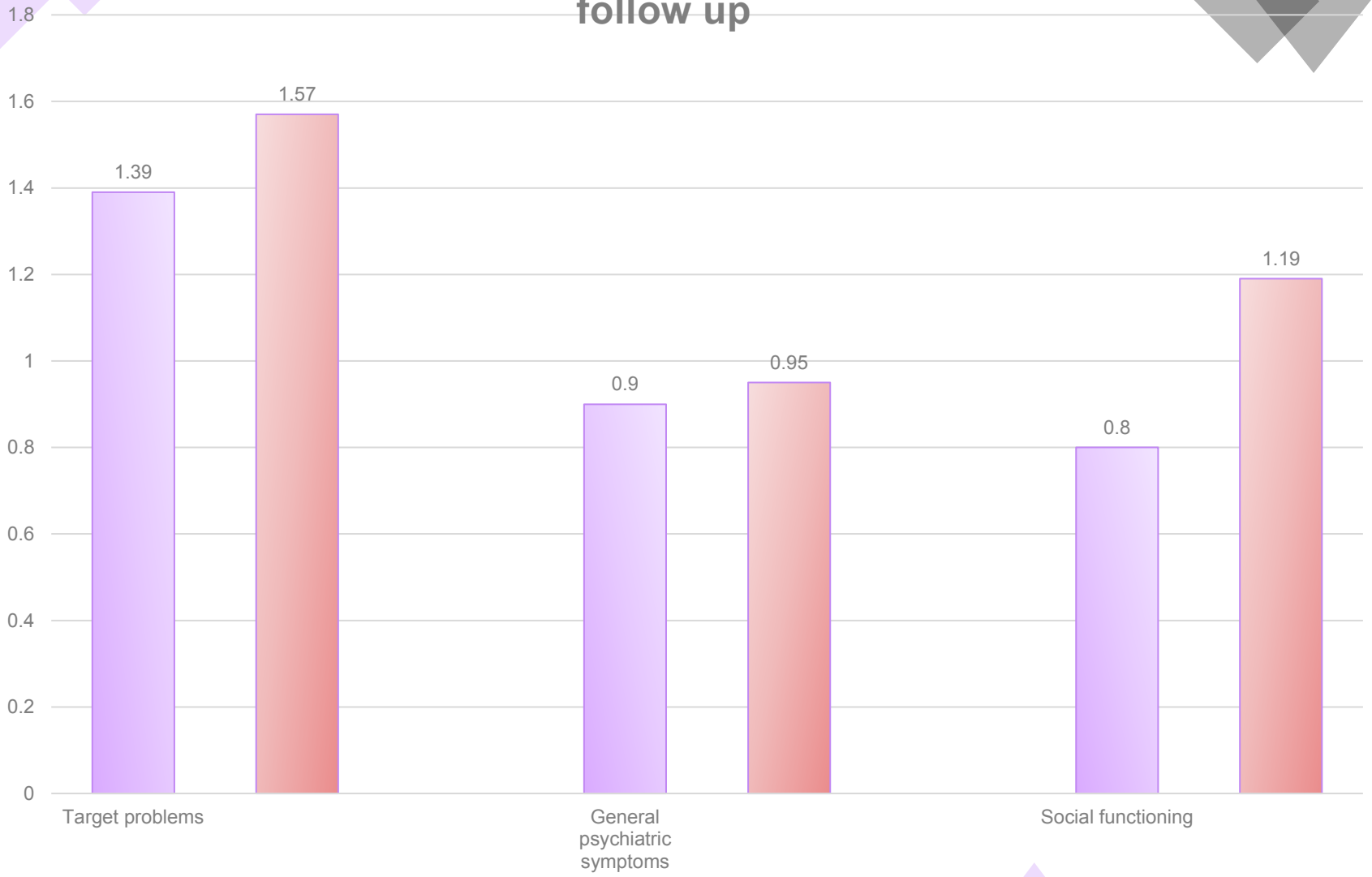
These effect sizes were stable and increased at follow-up (1.57, 0.95, and 1.19, respectively).

Effect sizes of STPP significantly exceeded those of waiting-list controls and treatments as usual.

No differences were found between STPP and other forms of psychotherapy.

Leichsenring, Rabung, Leibing (2004). The efficacy of short-term psychodynamic psychotherapy in specific psychiatric disorders. *Arch Gen Psychiatry*, 61.

Change in effect size at end of treatment and one year follow up



Leichsenring, Rabung, Leibing (2004). The Efficacy of Short-term Psychodynamic Psychotherapy in Specific Psychiatric Disorders. *Arch Gen Psychiatry*, 61.

Short term PDP for Personality Disorders

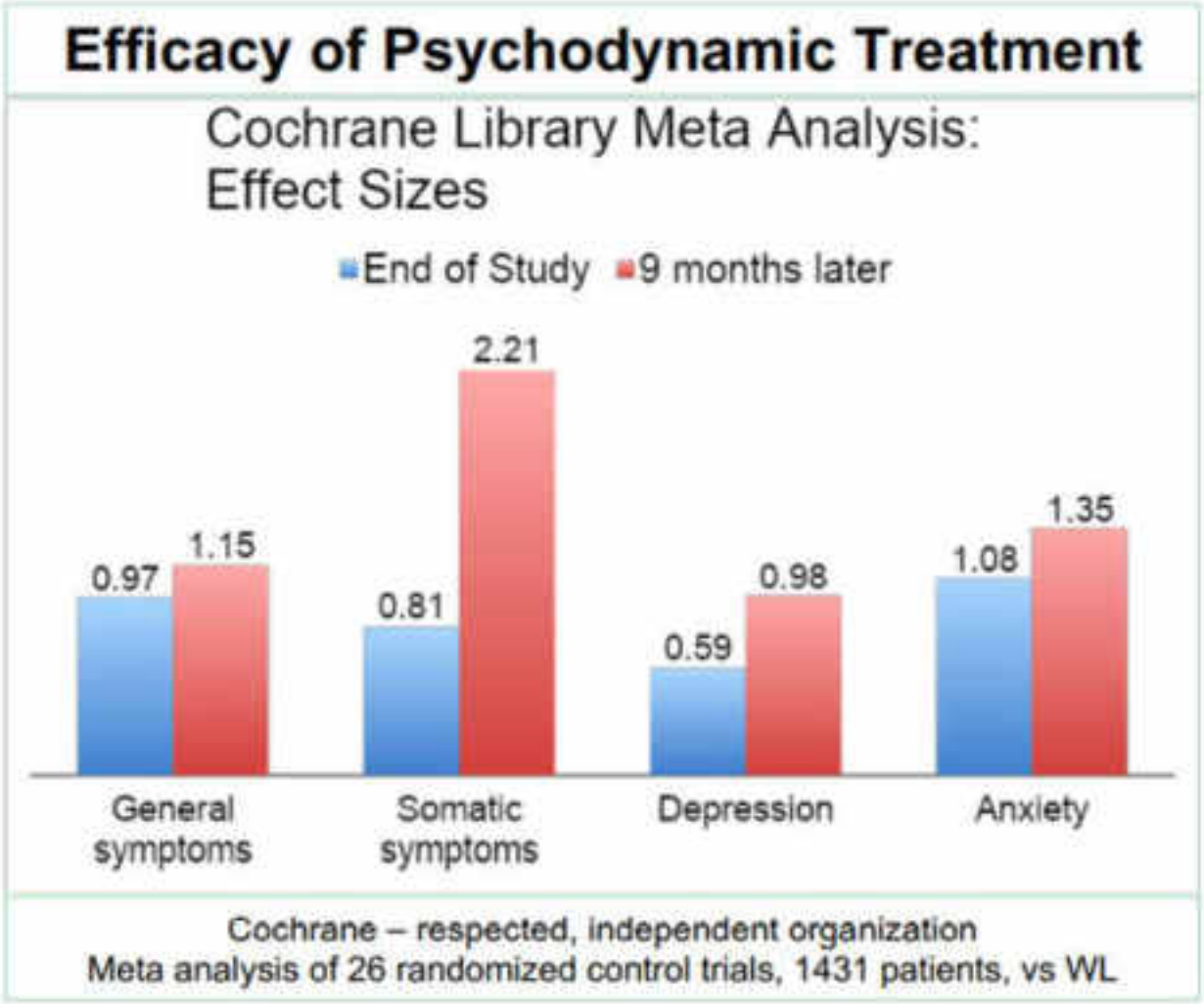
Allan Abbass[1], Joel Town, Ellen Driessen (2011). **The efficacy of short-term psychodynamic psychotherapy for depressive disorders with comorbid personality disorder**
DOI: 10.1521/psyc.2011.74.1.58

Conclusion: STPP warrants consideration as a first line treatment for combined personality disorder and depression.

Joel M Town[1], Allan Abbass, Gillian Hardy (2011). **Short-Term Psychodynamic Psychotherapy for personality disorders: a critical review of randomized controlled trials** DOI: 10.1521/pedi.2011.25.6.723

Conclusion: STPP an efficacious, empirically-supported treatment for PDs, producing significant and medium to long-term improvements for a large percentage of patients.

Improvements are substantial at end of study, and increase after treatment ends

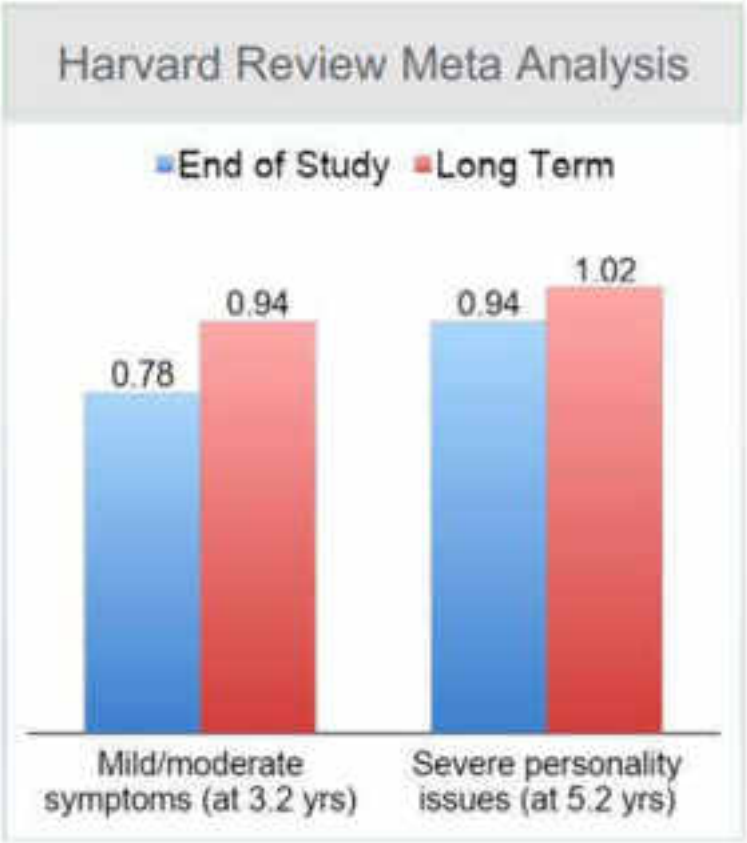


Source: Abbass etal, 2004

Efficacy of LTPP

For complex mental health conditions

Improvements continue 2 – 5 years after treatment ends



LTPP of at least 150 sessions

Source: de Maat etal, 2009

Long > Short term PDP

P Knekt[1], O Lindfors, T Härkänen, M Välikoski, E Virtala, M A Laaksonen, M Marttunen, M Kaipainen, C Renlund (2008).

Randomized trial on the effectiveness of long-and short-term psychodynamic psychotherapy and solution-focused therapy on psychiatric symptoms during a 3-year follow-up

•DOI: 10.1017/S003329170700164X

Conclusion: Significant reduction in symptoms of anxiety and depression during 3-year follow-up. STDP more effective than LTDP during first year. During second year follow-up no significant differences were found between the short-term and long-term therapies, but **after 3 years of follow-up LTDP was more effective**.

Paul Knekt 1, Olavi Lindfors, Maarit A Laaksonen, Raimo Raitasalo, Peija Haaramo, Aila Järvikoski (2008).

Effectiveness of short-term and long-term psychotherapy on work ability and functional capacity--a randomized clinical trial on depressive and anxiety disorders

DOI: 10.1016/j.jad.2007.08.005

Conclusion: Work ability during the 3-year follow-up. Short-term therapies showed 4-11% more improved work ability scores than long-term therapy at 7 month follow-up. During second year follow-up, no significant differences were found between therapies. After **3 years follow-up, long-term therapy was more effective than the short-term therapies** with 5-12% more improved scores. No differences in the prevalence of individuals employed or studying or in the number of sick-leave days were found between therapies during follow-up.

Long > Short term PDP

Paul Knekt[1], Olavi Lindfors, Laura Sares-Jäske, Maarit Laaksonen (2012)

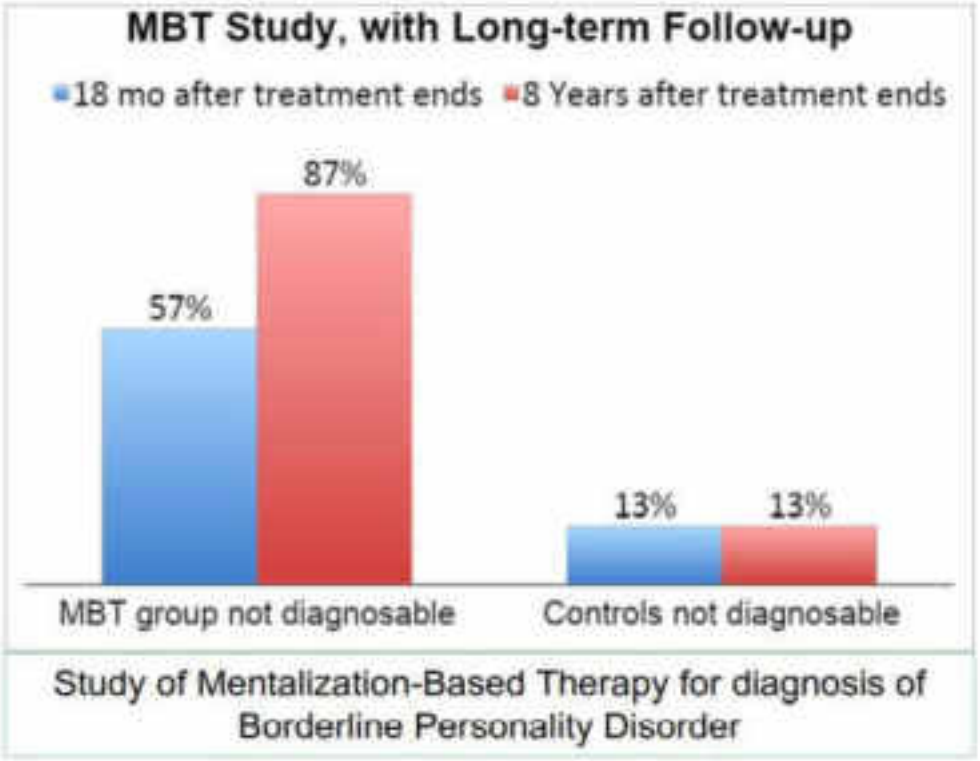
The effectiveness of psychotherapy on depression in the long term

Duodecim. 2012;128(3):267-74.

Conclusion: During a **5-year follow-up**, patients' recovery from symptoms and improvement in work ability were greater in long-term therapy compared with two, equally effective, short-term therapies.

Although short-term therapies were more cost-effective, many patients in them did not recover.

Even up to 8 years, after treatment ends, results continue to improve

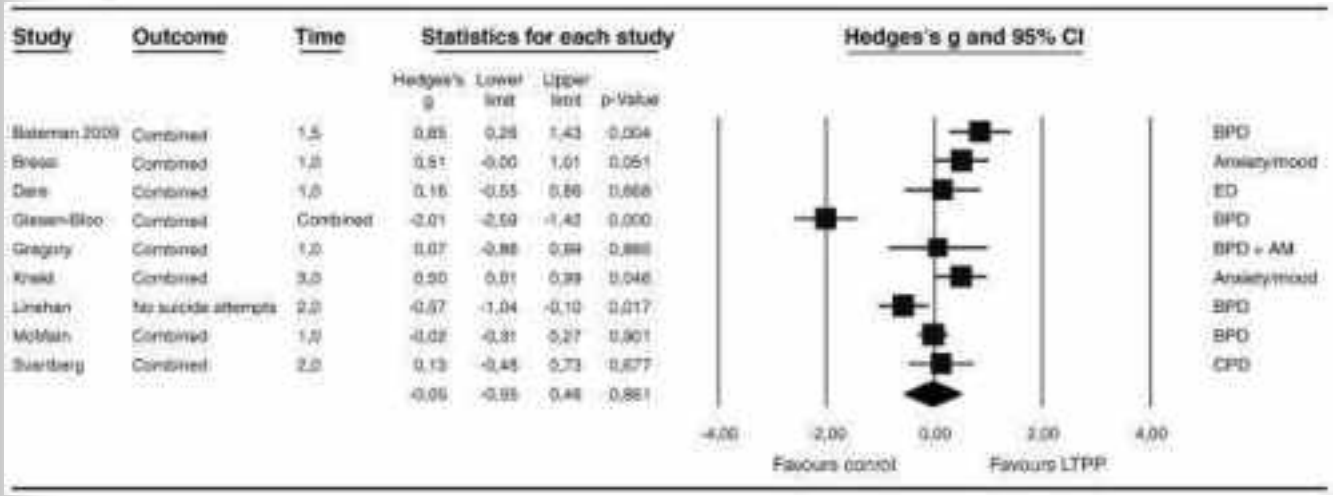


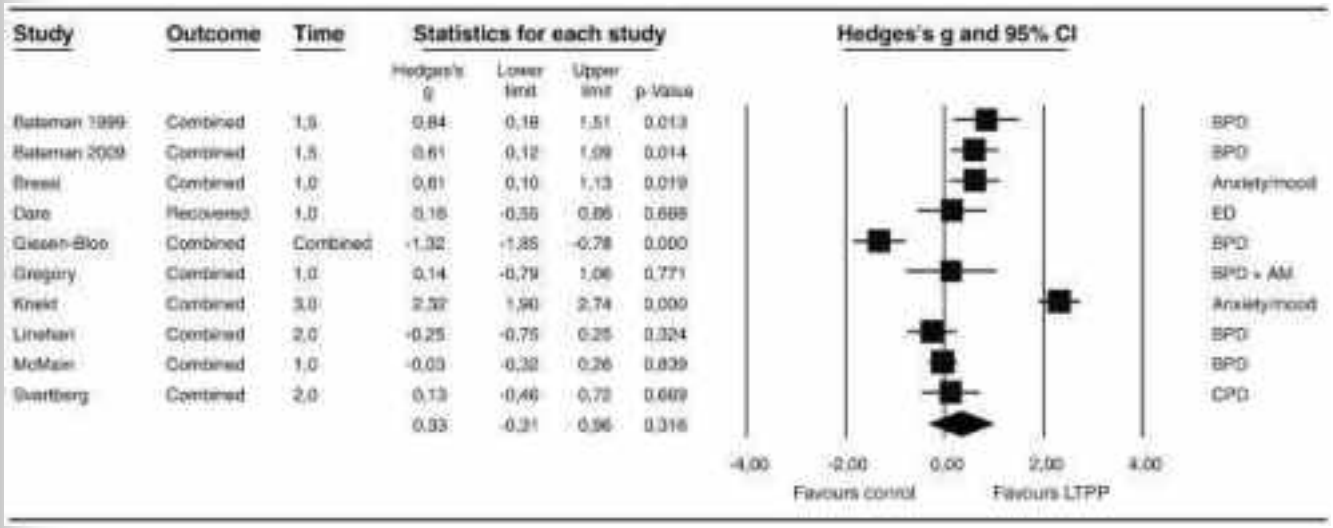
Minimum 18 months Tx

Source: Bateman, Fonagy, 2009

LTPP not effective? Beware investigator allegiance effects

Defined as >40 sessions
Most had 1 year F/U





Smit, Huibers, Ioannidis, van Dyck, van Tilburg, Arntz (2012). The effectiveness of long-term psychoanalytic psychotherapy—A meta-analysis of randomized controlled trials. *Clinical Psychology Review*, 32, 2.

Superiority of LTPP for complex mental disorders

- Abbass, Hancock, Hernderson, & Kisley, 2004, 2006
- de Maat, Philipszoon, Schoevers, Dekker, & de Jonghe, 2007
- de Maat, de Jonghe, Schoevers, & Dekker, 2009
- Leichsenring & Rabung, 2008, 2011b
- Leichsenring, 2009
- Gerber et al., 2011
- Town, Diener, Abbass, Leichsenring, Driessen, & Rabung, 2012
- Leichsenring, Abbass, Luyten, Hilsenroth, & Rabung, 2015

Superiority of LTPP for persistent depression

- Response to brief psychotherapy is limited in many depressed patients (Cuijpers, van Straten, Bohlmeijer, Hollon, & Andersson, 2010; Cuijpers, van Straten, Schuurmans, et al., 2010)

- which has led to the development of treatments that offer maintenance, particularly in patients with chronic depression (Steven, 2011).

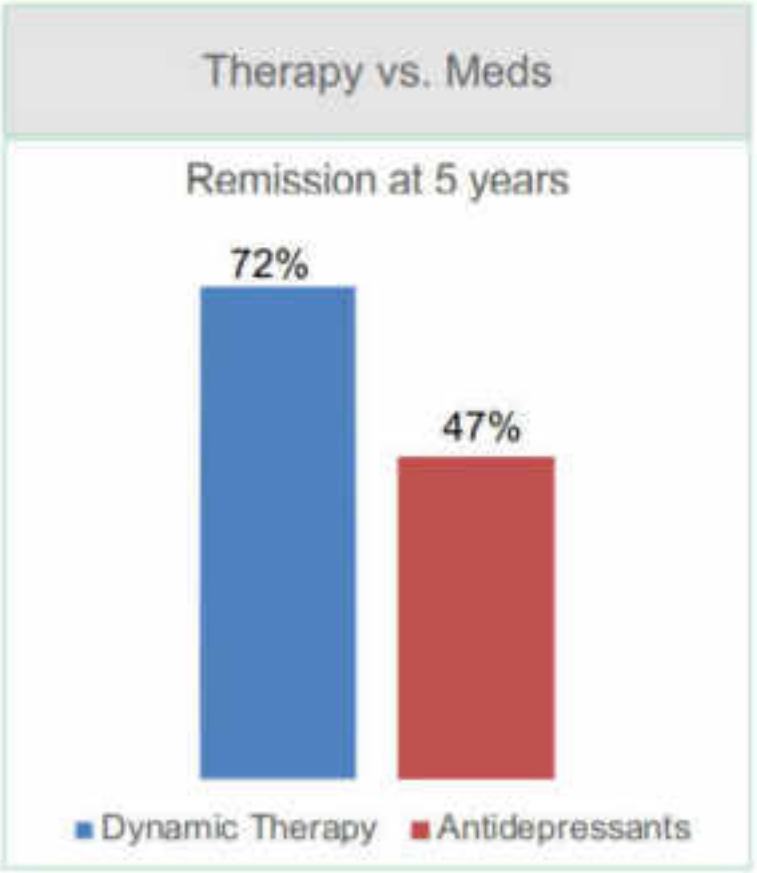
Open Door review of outcome and process studies in psychoanalysis

Efficacy studies of PDT in specific mental disorders

- **47 RCTs** provide evidence for the efficacy of LTPP in specific mental disorders in the **International Psychoanalytic Association Open Door Review (2015).**
- Depressive disorders
- Anxiety disorders
- Somatoform disorders
- Eating disorders
- Substance abuse disorders
- Borderline personality disorder
- Cluster C personality disorder
- Avoidant personality disorder

https://www.ipa.world/ipa/IPA_Docs/Open%20Door%20Review%20III.pdf

Benefits of psychotherapy endure



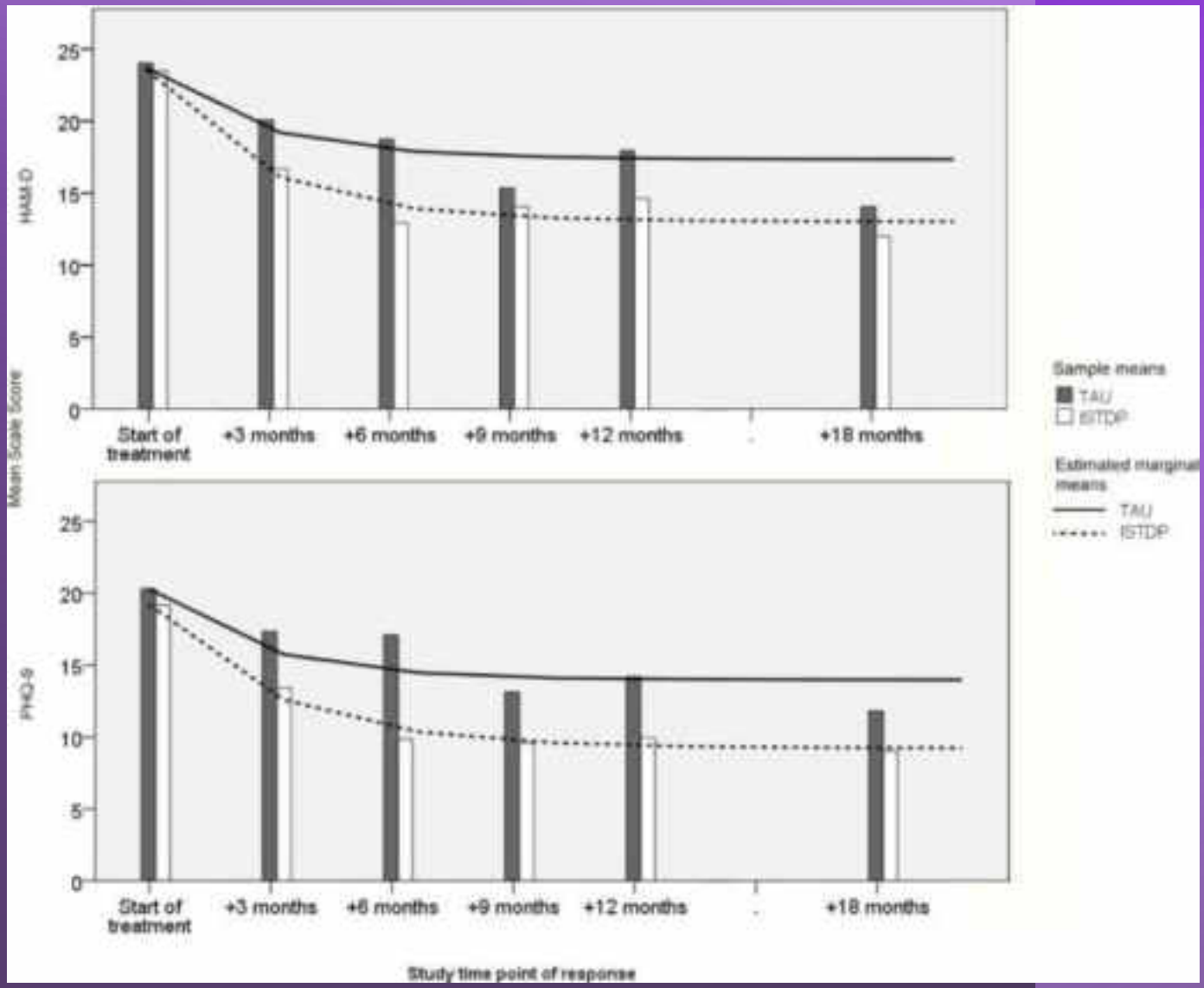
Source: Rosso et al, 2019

Is it all about the higher dose?

- YES! Both a high dose and the application of psychoanalytic techniques facilitate therapeutic change in patients with major depression.
- LTPP is an effective treatment for major depression.

Zimmermann, Löffler-Stastka, Huber, Klug, Alhabbo, Bock, & Benecke (2015). *Clinical Psychology and Psychotherapy,* 22, 469–487.

40% in remission from treatment resistant depression at 18 months following ISTDP



Town, Abbass, Stride, Nunes, Bernier, Berrigan (2020). Efficacy and cost-effectiveness of intensive short-term dynamic psychotherapy for treatment resistant depression: 18-Month follow-up of the Halifax depression trial,. *Journal of Affective Disorders,,* 273, 194-202. https://doi.org/10.1016/j.jad.2020.04.035.

What are the alternatives?

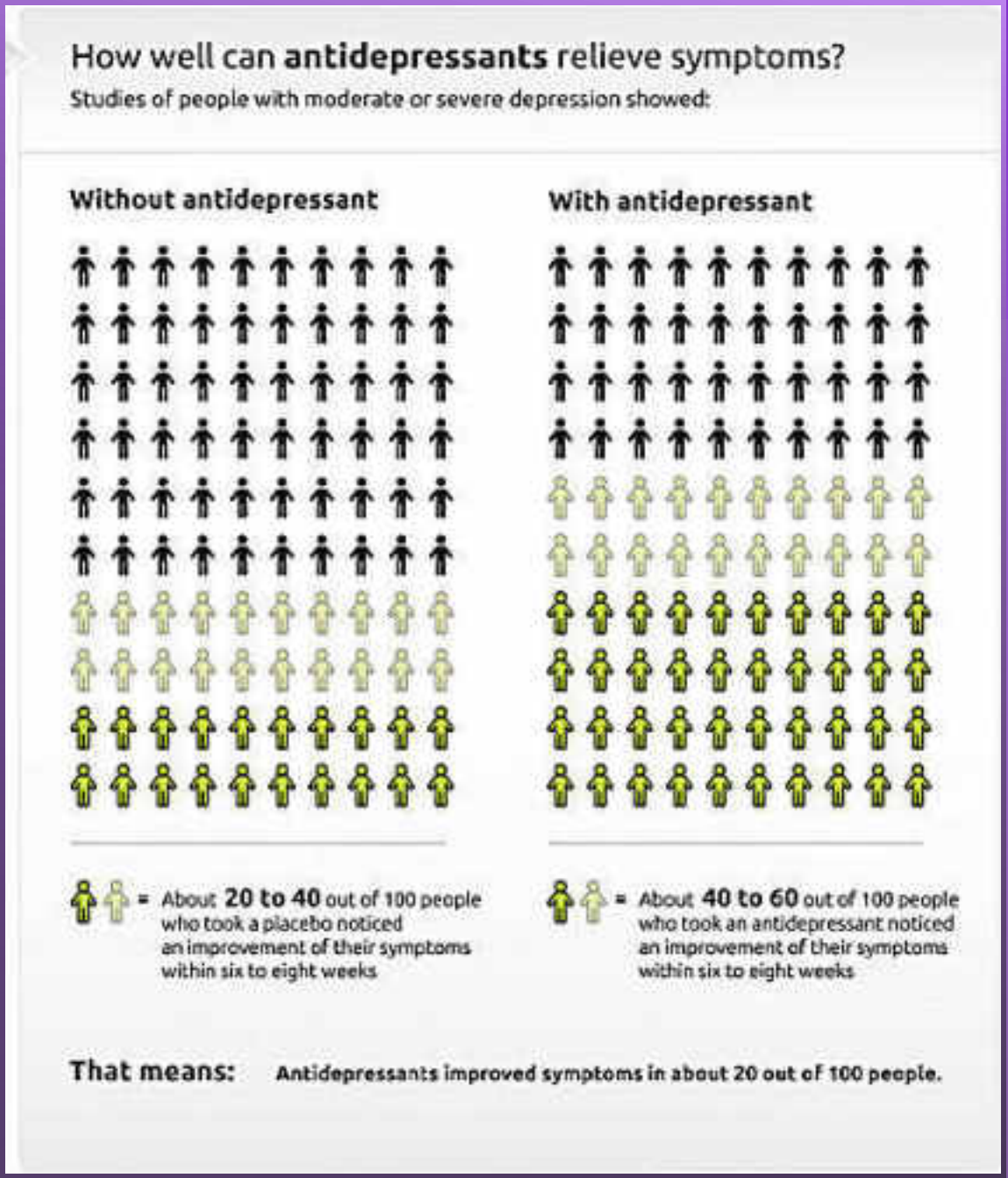
*Antidepressants

*CBT

*Placebo

*Passage of time/do nothing

2020



https://www.ncbi.nlm.nih.gov/books/NBK361016/

- Without preventive treatment: 50 out of 100 people taking placebo relapsed within 1-2 years.

- With preventive treatment: 23 out of 100 people taking an antidepressant relapsed within 1-2 years.

So, taking an antidepressant prevented relapse in 27 out of 100 people.

Biggest effect sizes for medications:

*PPI for reflux oesophagitis =1.39

*Oxycodone +paracetamol for post operative pain =1.04

*Antipsychotics for schizophrenia =0.51

*antidepressants for MDD=0.38

Psychotherapy

*Psychosomatic symptoms = 2.21

*Anxiety =1.35

*Depression=0.98

https://bmcmedicine.biomedcentral.com/articles/10.1186/s12916-015-0494-1/figures/1

2015

N Engl J Med: Meta Analysis of Antidepressant Effect Size

- All registered FDA antidepressant studies between 1987 and 2004. 12,564 patients.
  - 74 total studies: 48 published, 26 unpublished ;

	Positive	Negative	Total
Published	37	11	48
Unpublished	1	25	26
Total	38	36	74

48% of studies were Negative Studies

Efficacy of antidepressants was .32

Erick H. Turner, M.D., Annette M. Matthews, M.D., Eftihia Linardatos, B.S., Robert A. Tell, L.C.S.W., and Robert Rosenthal, Ph.D. Selective Publication of Antidepressant Trials and Its Influence on Apparent Efficac
N Engl J Med 2008; 358:252-260 January 17, 2008

The Case for Psychoanalysis , Version 4 - YouTube

Relapse in Major Depressive Disorder

STAR*D – The Down Side. . . .

	Relapse Rate over 12 months	Ave Months to Relapse
Step 1	40.1%	4.1
Step 2	55.3%	3.9
Step 3	64.6%	3.1
Step 4	71.0%	3.3

Rush AJ, Trivedi MH, Wisniewski SR, et al. Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: a STAR*D report. Am J Psychiatry. 2006;163:1905–1917.

STAR*D: What Have We Learned?

Sequenced Treatment Alternatives to Relieve Depression (STAR*D)

- Longer times than expected were needed to reach response or remission. One-third who responded did so after 6 weeks.

- 80% of 438 patients completed 6 weeks+ treatment with the switch medication, and all treatment outcomes were comparable.
- 91 (21%) remitted, 40 (9%) responded without remission and 255 (58%) had no meaningful benefit.
- Two-thirds of remissions and half of the responses occurred after 6 weeks of treatment, and 43 (33%) of responses occurred after 9 weeks or more of treatment.

- There was no difference between cognitive therapy as a switch or as augmentation strategy versus medication as a switch or augmentation strategy

- Switching to another antidepressant following SSRI failure appears largely ineffective

Rush AJ. STAR*D: what have we learned? Am J Psychiatry. 2007 Feb;164(2):201-4. doi: 10.1176/ajp.2007.164.2.201. PMID: 17267779.

Cognitive Behaviour Therapy

- Longitudinal cohort study involved 439 patients who completed CBT

- Patients provided depression and anxiety measures on a monthly basis up to 12 months post-treatment.

- 53% relapsed within 1 year.

- Patients with residual depression symptoms at the end of treatment were twice as likely to relapse.

Ali, S., Rhodes, L., Moreea, O., McMillan, D., Gilbody, S., Leach, C., ... & Delgadillo, J. (2017). How durable is the effect of low intensity CBT for depression and anxiety? Remission and relapse in a longitudinal cohort study. *Behaviour research and therapy*, *94*, 1-8.

CBT worse than TAU!

The Swedish Experience

- Between 2008 and 2012, 3.8 billion SEK [approximately 500+ million USD] was spent on a program to reduce absenteeism and welfare programs ('sick days') due to a variety of physical and mental disorders. Each year 40-50,000 people were treated; more than 80% were psychiatric patients and 90% of these patients were treated with CBT in the program.
- Swedish government in 2011 commissioned the Karolinska Institutet, a medical university, to conduct a study. Results showed those who received CBT had slower recovery and increased sick days than comparable controls with TAU.
- Several years later a second study showed similar results; Out of those who were 'sick listed', those receiving CBT did not do any better than TAU controls.
- No economic benefit was found for doing CBT in either study compared to the treatment as usual group.

Sandell, R. (personal communication June 2, 2014) Professor at Lund University in Sweden

Comparison of treatments

CBT	
Syndrome	Effect Size
MDD	.82
MDD	.23
GAD	.82
Panic Disorder:	.91
Social Phobia:	.93
OCD	1.3
PTSD	1.36
Chronic Pain	.40

Antidepressants	
Effect Size	0.32

Psychoanalytic	
Harvard Review Psychoanalysis	End of Study Effect Size
Mild/Mod Symptoms	.78
Severe Personality	.94
Cochrane Library Psychoanalysis	End Of Study Effect Size
General	.97
Somatic	.81
Depression	.59
Anxiety	1.08

At the end of therapy, results are comparable but NOT longer term – LTPP is superior to all other treatments

Summary

- CBT/TAU
  - Cost effective
  - Short duration
  - Can treat large numbers
  - Social acceptability
  - Good end of Tx effects BUT significant relapse rates
- Medication
  - Lowest effect sizes
  - Many negative studies
  - Not better than placebo
  - Side effects
- LTPP
  - More expensive
  - Less understood, less socially accepted
  - Can treat fewer people
  - Better outcomes for severe personality disorders and severe depression
  - Equal end of Tx effects BUT lower relapse rates and better outcomes long term

The debate is clearly not over

Looking at recent Cochrane registrations

The future: Trial registrations

- Duloxetine versus 'active' placebo, placebo or no intervention for major depressive disorder; a protocol for a systematic review of randomised clinical trials with meta-analysis and trial sequential analysis. Syst Rev. 2021 06 09; 10(1):171.

- Tricyclic antidepressants versus 'active placebo', placebo or no intervention for adults with major depressive disorder: a protocol for a systematic review with meta-analysis and Trial Sequential Analysis. Syst Rev. 2021 08 13; 10(1):227.

- Beneficial and harmful effects of antidepressants versus placebo, 'active placebo', or no intervention for adults with major depressive disorder: a protocol for a systematic review of published and unpublished data with meta-analyses and trial sequential analyses. Syst Rev. 2021 05 25; 10(1):154.

The future: Trial registrations

- **Short-term versus long-term psychotherapy for adult psychiatric disorders: a protocol for a systematic review with meta-analysis and trial sequential analysis** Sophie Juul, Stig Poulsen, Susanne Lunn, Per Sørensen, Janus Christian Jakobsen & Sebastian Simonsen,

Systematic Reviews **volume 8**, Article number: 169 (2019)

- Psychiatric disorders are highly prevalent and associated with great symptomatic, functional, and health economic burdens. Psychotherapy is among the recommended and used interventions for most psychiatric disorders and is becoming widely accessible in mental health systems. The effects of specific forms of psychotherapy (e.g., psychodynamic therapies, cognitive and behavioral therapies, humanistic therapies, and systemic therapies) have been assessed previously in systematic reviews, but the appropriate psychotherapy duration for psychiatric disorders has not been reviewed. The aim of this systematic review will be to synthesize the evidence of the effects of short-term compared with long-term psychotherapy for all adult psychiatric disorders.

The future: Trial registrations

- Adverse effects of psychotherapy: protocol for a systematic review and meta-analysis

  Rahel Klatte, Bernhard Strauss, Christoph Flückiger and Jenny Rosendahl

  - *Systematic Reviews* 2018 7:135

While it is well known that psychotherapy is efficacious in the treatment of mental disorders, much less is known about the adverse effects of psychotherapeutic interventions. The aim of this systematic review is to examine the definition, frequency, nature, and severity of adverse effects occurring parallel to or following psychotherapeutic treatment and to compare it against control groups.

- Predictors and moderators of outcome of psychotherapeutic interventions for mental disorders in adolescents and young adults: protocol for systematic reviews

  Eleni Vousoura, Vera Gergov, Bogdan Tudor Tulbure, Nigel Camilleri, Andrea Saliba, LuisJoaquin Garcia-Lopez, Ioana R. Podina, Tamara Prevendar, Henriette Löffler-Stastka, Giuseppe Augusto Chiarenza, Martin Debbané, Silvana Markovska-Simoska, Branka Milic, Sandra Torres, Randi Ulberg and Stig Poulsen

  - *Systematic Reviews 2021 10:239*

Adolescence and young adulthood is a risk period for the emergence of mental disorders. There is strong evidence that psychotherapeutic interventions are effective for most mental disorders. However, very little is known about which of the different psychotherapeutic treatment modalities are effective for whom. This large systematic review aims to address this critical gap within the literature on non-specific predictors and moderators of the outcomes of psychotherapeutic interventions among adolescents and young adults with mental disorders.

Psychotherapy Action Network (PsiAN)
Membership in PsiAN is free
Contact lindamichaels.psyd@gmail.com

Society for Psychotherapy Research
https://www.psychotherapyresearch.org/

PSYCHOANALYSIS NOW https://psychoanalysisnow.com/

The International Psychotherapy Institute
https://theipi.org/

International Psychoanalytic Association
https://www.ipa.world/