

## Does Psychotherapy Work?

Is there any scientific evidence that psychotherapy actually works? In a word, Yes. On this page, I will summarize some of that evidence.

Let's begin with a technical term: "meta-analysis." Suppose there are 25 published studies of psychotherapy as a treatment for depression, conducted by many researchers in different locations. The studies, of course, will differ from each other in several ways: the various measures of depression that were used, how long treatment lasted, what training the therapists had, and so forth. But all of the studies have one thing in common: they all measure symptoms of depression before and after psychotherapy. A meta-analysis would gather all 25 studies together, combine them into a single data base, and then calculate an average overall effect of psychotherapy on depression.

To calculate this average effect, researchers use a statistical tool designed just for this purpose. It is called Effect Size, and it is used widely in studies of both medical and psychological treatment. From here on, I'll use ES as an abbreviation for Effect Size. To illustrate how this tool is used, let's go back to our meta-analysis of 25 published studies of depression. Suppose all of the studies measured symptoms of depression in two groups of people—those who received no treatment at all, and those who received treatment for depression. Researchers try to make these two groups equal in every way (age, gender, severity of symptoms, etc.), except that one group is treated and the other is not. The researchers then calculate average score on all measures of depression for the "no treatment" groups. That score will be 50<sup>th</sup> percentile on a bell curve. The researchers will then calculate the average depression scores for the treatment groups, as well.

The next step is to compare the average scores of the two groups. The average score of the "no treatment" group (the 50<sup>th</sup> percentile) is given an ES of 0.0. Then the average score of the treatment group is compared to the "no treatment" group. That produces an ES for treatment.

Suppose the treatment group's ES +1.0. This means that a very large improvement occurred. How large? An ES of +1.0 indicates that treatment improved the average score in the treatment groups by exactly one standard deviation on the bell curve. In comparative terms, this means that the average score without treatment was at the 50<sup>th</sup> percentile, and the average score following treatment was at the 84<sup>th</sup> percentile. Put another way, the average person in the treatment group scored higher on the depression measures than 84% of the control group. An ES of 2.0 would translate to an improvement up to the 98<sup>th</sup> percentile. And so on. (Of course, if the ES is a negative number [say, -1.0], then the researcher may be disappointed, because that would mean that the people treated for depression worsened during treatment! An ES of -1.0 would mean the average person in the treatment group scored higher than only 16% of the control group.)

In psychological and medical studies, an ES of .8 is often regarded as "large." An ES of .5 is "moderate, and .2 is "small" (Cohen, 1988).

Now. What are the Effect Sizes for psychotherapy?

- The first ever meta-analysis of psychotherapy studies was conducted in the 1970's. It examined 475 separate studies and found an ES of .85. (Smith, Glass, & Miller, 1980).
- A 1993 study examined 18 separate meta-analyses of psychotherapy outcomes, and found a median ES of .75. (Lipsey & Wilson, 1993).
- A more recent analysis of psychotherapy studies that treated a wide variety of psychological problems showed an ES of .97 for improvement of symptoms at the conclusion of psychotherapy (Abbass, Hancock, Henderson, & Kisely, 2006). Here's another interesting finding from this study. When folks were tested again more than 9 months after treatment had concluded, the ES had increased to 1.51. Translated into percentiles, an ES of 1.51 means that when improvement in target symptoms was measured, the average person who engaged in psychotherapy was better off than 94% of those who had not received psychotherapy. This finding also means that even after psychotherapy ends, the symptoms continue to improve.
- Another recent meta-analysis of 23 studies found that psychotherapy has a strong impact even on physical complaints (specifically, on cardiovascular, respiratory, dermatological, neurological, gastrointestinal, musculoskeletal, genitourinary, immunological problems). The overall ES for improvement in these physical symptoms was .59 (Abbass, Kisely, & Kroenke, 2009).

To give you some idea of how large these changes are, note the Effect Sizes for a few anti-depressant medicines, as tabulated by the U.S. Food and Drug Administration: Prozac: 0.26; Zoloft: .26; Celexa; .24; Lexapro: .31. The average ES for all anti-depressant medications was .31. (Turner, Matthews, Linardatos, Tell, & Rosenthal, 2008). These are notably smaller effects than those achieved by psychotherapy, but they are still very important. The best recovery rates for depression, by the way, use both psychotherapy and medications.

So. Does psychotherapy work? Yes. As former New York Yankee manager Casey Stengel used to say about baseball statistics, "You could look it up!" Well, if you wish to look up the studies I've just mentioned, here are the references.

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#### References

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