

The questions below are copyrighted and the property of the Examinations Unit at the Royal College of Psychiatrists.

In a study comparing two treatments for depression, which of the following is associated with greater statistical power?

- a) Comparison of active drug against active drug
- b) Comparison of active drug against placebo *
- c) Sample heterogeneity
- d) Small sample size
- e) The use of a categorical outcome variable

What is the range of values for a correlation coefficient?

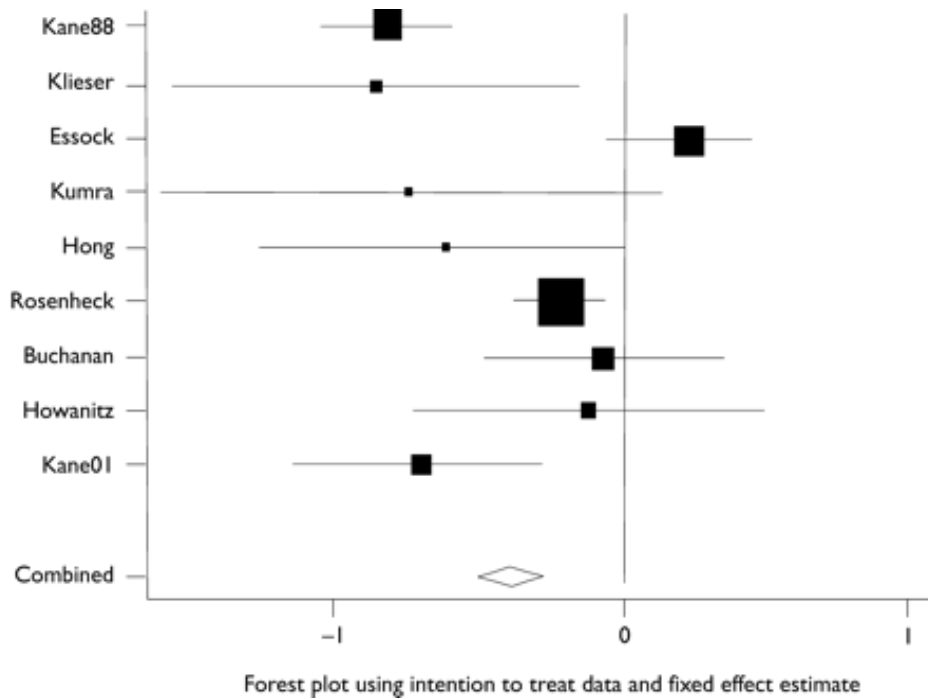
- a) 0 to infinity
- b) 0 to 100
- c) 0% to 100%
- d) -1 to +1 *
- e) Minus infinity to plus infinity

The number of new cases of a disease identified in a population over a period of time is a measure of which of the following?

- a) Incidence *
- b) Likelihood ratio
- c) Period prevalence
- d) Point prevalence
- e) Sensitivity

Use the Forest plot, below, to answer the following 4 questions.

The Forest plot, below, is from a meta-analysis comparing effectiveness of clozapine and conventional antipsychotic drugs in treatment resistant schizophrenia. (negative numbers favour clozapine)



How many studies show a statistically significant benefit of clozapine over conventional antipsychotics?

- a) 0
- b) 1
- c) 2
- d) 4 *
- e) 8

How many studies show a statistically significant benefit of conventional antipsychotics over clozapine?

- a) 0 *
- b) 1
- c) 2
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What conclusion can be drawn from this plot? Select the most appropriate answer.

- a) All the studies used the same outcome measure.
- b) Clozapine definitely works in treatment resistant schizophrenia.
- c) Random effects modelling would produce a very different result.
- d) Significant heterogeneity is likely to be present. *
- e) The study by Klieser had more participants than that done by Hong.

Which study contributed most weight to the meta-analysis?

- a) Essock
- b) Kane 88
- c) Klieser
- d) Kumra
- e) Rosenheck *

Theme: Appraisal of an intervention trial

Options:

- A. 10
- B. 15
- C. 20
- D. 40
- E. 50
- F. 60
- G. 80
- H. 100

Lead in: A randomised controlled trial comparing the efficacy of xanomeline (cholinergic M1 selective agonist) against chlorpromazine (comparative control) was conducted in 2009. This trial also reported the safety and side effect profile of the 2 drugs.

500 patients were in each arm receiving either xanomeline or chlorpromazine. In the xanomeline group, 250 patients showed clinical response. In the chlorpromazine group, 200 patients showed clinical response. 100 patients on xanomeline reported extrapyramidal side effects (EPSEs) while 50 patients on chlorpromazine group reported EPSEs.

Calculate the following and chose the **ONE** correct option from the above list.

Each option may be used once, more than once or not at all.

The clinical response in xanomeline group (expressed as a percentage). Choose **ONE** option. E

The clinical response in chlorpromazine group (expressed as a percentage). Choose **ONE** option. D

Absolute benefit increase for clinical response for xanomeline compared with chlorpromazine (expressed as a percentage). Choose **ONE** option. A