Imputation of response rates from means and standard deviations in schizophrenia.

Abstract:
Missing outcome data is a major threat in meta-analytical studies of schizophrenia. Most clinical trials in psychiatry report only continuous outcome measures and express the effect of an intervention as a difference of means. However, these results are difficult to interpret for clinicians. Converting continuous data to binary response rates is one possible solution to the problem. Based on means and standard deviations for a continuous outcome, we examined the performance of an imputation method to define a dichotomous outcome using original individual patients’ data from 16 randomized trials (6276 participants) comparing antipsychotic drugs in schizophrenia. We concluded that the imputed values re-captured in a reasonable degree the observed values providing a simple and practical alternative methodological choice for imputation of missing binary data in schizophrenia trials; nevertheless, the imputation method tended to introduce biases, especially for extreme risks and large treatment differences.