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Title: *Comparison of Publication Bias*

Abstract

Major Depressive Disorder is a serious mental illness with potentially lifelong consequences. The foremost means of pharmacological treatment is with SSRIs, however there are concerns with publication bias misrepresenting the efficacy. This study intends to examine the impact of study type on publication bias, as observational trials are more likely to be performed by clinicians without industry funding.

This study is a database review drawing from the Pubmed database and CT.gov. The keywords included RCT, cohort, case control, depression, SSRI, and SNRI. Studies included were controlled (through active, non-exposure, or placebo) and required to have an endpoint addressing efficacy (in terms of change in depressive symptoms) or safety in relation to fluoxetine, paroxetine, sertraline, citalopram, or escitalopram, and were excluded if they drew from a duplicate data source. The primary endpoint was the proportion of positive trials, defined as statistical significance in symptom reduction or statistical lack of significance in adverse events.

Out of the 161 eligible studies, 110 studies matched inclusion and exclusion criteria. There were 52 randomized controlled trials (RCT) and 58 observational studies. Out of all studies included, 47% were found to be positive and 53% found to be negative. The proportion of positive RCT was 48% and the proportion of positive observational studies was 46.5%. When broken down by funding, studies without listed sources had a 54% rate of positive trials. Those with industry funding had a rate of 38%, those with government funding had a 48%, and those with institutional funding had a rate of 14%.

While differences between the rates of positive RCT and observation studies was minor, larger differences were noted based on declared funding sources. The results of this study should be considered exploratory, but show potential worth in repeating with broader inclusion criteria.