Publication bias involving psychiatric medications may provide physicians with an incomplete picture

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Physicians who prescribe antipsychotic medications may be basing their decisions on incomplete information, according to new research published by scientists at Oregon Health & Science University. The study is published in *PLoS Medicine*, a peer-reviewed open-access journal published by the Public Library of Science.

This latest research follows a highly publicized 2008 report in the New England Journal of Medicine demonstrating that antidepressant drug trials were selectively published, exaggerating their apparent effectiveness. This follow-up study suggests that similar concerns exist, though to a somewhat lesser extent, with antipsychotic drugs.

The authors reached these conclusions by reviewing 24 FDA-registered premarketing trials for eight second-generation antipsychotics—aripiprazole (Abilify), iloperidone (Fanapt), olanzapine (Zyprexa), paliperidone (Invega), quetiapine (Seroquel), risperidone (Risperdal), risperidone long-acting injection (Consta), and ziprasidone (Geodon). They then compared the results in the FDA's review documents to the results presented to clinicians and researchers in medical journals.

The authors found that four premarketing trials submitted to the FDA remained unpublished and that all of them yielded unflattering results. Three showed the new antipsychotic had no significant advantage over

placebo. In the fourth, the drug was superior to placebo, but it was significantly inferior to a much less expensive competing drug.

In the published trials, there was some evidence that the journal articles over-emphasized efficacy of the new drug. For example, an FDA review revealed that one of the newer drugs, iloperidone (Fanapt), was statistically inferior to three different competing drugs, but this information was not mentioned in the corresponding journal articles.

On the other hand, when the authors used meta-analysis to combine trial data and compare all eight drugs to placebo, they found that publication bias had little impact on the drugs' overall apparent efficacy. This stood in contrast to the researchers' previous study on antidepressants, for which publication bias had a much more substantial impact.

"When you compare between drug classes and use FDA data, it's clear that, overall, antipsychotics are more effective than antidepressants. But when you rely on the data in medical journals, the difference between these two drug classes is obscured," said Erick Turner, M.D., an assistant professor in the Department of Psychiatry and the Department of Pharmacology in the OHSU School of Medicine. Turner also serves as a staff psychiatrist at the Portland Veterans Affairs Medical Center's Mood Disorders Program.

The authors wrote in the paper, "Publication bias can blur distinctions between effective and ineffective drugs."

The authors concluded: "With further studies investigating publication bias in other drug classes, a more accurate evidence base can emerge."

More information: Turner EH, Knoepflmacher D, Shapley L (2012) Publication Bias in Antipsychotic Trials: An Analysis of Efficacy Comparing the Published Literature to the US Food and Drug

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