Title	Using clinical trial registries to inform Copas selection model for publication bias in meta-analysis
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論 文 内 容 の 要 旨
Synopsis of Thesis

氏　　名 Ｎａｍｅ	黄傲
論文題名 Title	Using clinical trial registries to inform Copas selection model for publication bias in meta-analysis （コパス選択モデルによる公表バイアス評価における臨床試験登録システムの利用）

論文内容の要旨

〔目　的(Purpose)〕

Publication bias is one of the most important concerns in systematic reviews and meta-analyses. In addressing publication bias in meta-analyses, sensitivity analysis with the Copas selection model is a more objective alternative to widely-used graphical methods such as the funnel-plot and the trim-and-fill method. Despite its ability to quantify the potential impact of publication bias, a drawback of the model is that some parameters need to be specified. This may result in some difficulty in interpreting the results of the sensitivity analysis. In this paper, we propose an alternative inference procedure for the Copas selection model by utilizing information from clinical trial registries.

〔方法ならびに成績(Methods/Results)〕

Prospective registration of study protocols in clinical trial registries is a useful way to minimize the risk of publication bias in meta-analysis, and several clinical trial registries are available nowadays. By utilizing the information on unpublished studies obtained from the clinical trial registries, we proposed a full likelihood based method for the Copas selection model, all the unknown parameters in the Copas selection model can be estimated from data and successfully resolved the issue of the sensitivity analysis approach.

A simulation study revealed that our proposed method resulted in smaller biases and more accurate confidence intervals than existing methods. Furthermore, three published meta-analyses were re-analyzed to demonstrate how to implement the proposed method in practice.

〔総　括(Conclusion)〕

After long years development of clinical trial registries, prospective registration has been widely accepted by clinical trial researchers, and searching on clinical trial registries plays a more and more important role when performing systematic reviews. This entails us to identify those unpublished studies and give us a potential to handle the publication bias issue as a general missing data problem. We would like to claim that the clinical trial registries should play an important role to fill the gap between the publication bias issue and the general missing data problem.

論 文 審 査 の 結 果 の 要 旨 及 び 担 当 者

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論文審査の結果の要旨

〔目　的(Purpose)〕

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博士学位に値するものと認める。