

COMMENTS AND  
RESPONSES

**Comment on: Pan et al. Bidirectional Association Between Depression and Metabolic Syndrome: A Systematic Review and Meta-analysis of Epidemiological Studies. Diabetes Care 2012;35:1171-1180**

Pan et al. (1) recently concluded a meta-analysis on the relationship between depression and metabolic syndrome (MetS), targeting 29 cross-sectional and 11 cohort studies. They calculated the pooled odds ratio using random-effects models. Then, they

speculated the mechanism of the cause-effect relationship between the two.

But before accepting their comments, I want to point out the fragility of this meta-analysis. Pan et al. handled articles adopting different definitions of MetS and depression, and the participants' characteristics such as age and sex composition differed from each other.

In addition, they mentioned that they contacted the authors for unpublished data and concluded that there is no publication bias. However, publication bias cannot be solved by these processes, and meta-analysis is ordinarily conducted with no relation to publication bias.

I agree that their meta-analysis is the first trial and is of significance in this academic field. To improve the significance of the systematic review of the association between MetS and depression, baseline information on each reference needs to be better explored. For example, one of the standard criteria should be adopted for the definition of MetS, and the DSM-IV should be adopted for the definition of depression.

My opinion can be applied to other meta-analyses, and I feel that a meta-analysis with clear definition of disease would provide the future direction of

study. In this context, the trial presented by Pan et al. would become a creative work to clarify the relationship between depression and MetS, although the decrease in the number of references leads to the loss of statistical power.

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**References**

1. Pan A, Keum N, Okereke OI, et al. Bidirectional association between depression and metabolic syndrome: a systematic review and meta-analysis of epidemiological studies. *Diabetes Care* 2012;35:1171-1180