

Effects of qigong on systolic and diastolic blood pressure lowering: a systematic review with meta-analysis and trial sequential analysis

ABSTRACT

Background: The benefits of qigong for systolic and diastolic blood pressure (BP) reduction have been noted in previously published systematic reviews; however, the data on its effectiveness has been at best scarce. We aimed to update the evidence of qigong on blood pressure reduction after taking into consideration the risks of random error and reliability of data in the cumulative meta-analysis using trial sequential analysis (TSA). **Methods:** Included trials were assessed using Cochrane risk of bias instrument. We performed meta-analysis with random-effects model and random errors were evaluated with TSA. We performed the search for the eligible randomized controlled trial (RCT) through Medline, Cinahl, Cochrane Central Register of Controlled Trials and also PubMed. **Results:** A total of 370 subjects sourced from seven eligible RCTs were entered into the analysis. The pooled results demonstrated the significant reduction with the use of qigong of the systolic blood pressure [weighted mean difference (WMD), -10.66 mmHg (95% confidence interval (CI) = -17.69 , -3.62 , $p < 0.001$] and diastolic BP [WMD, -6.76 mmHg, 95% CI = -12.22 , -1.30 , $p < 0.001$] as compared to the control group. **Conclusions:** Significant reductions in BP is seen with the use of qigong as compared with the control group, suggesting that qigong may be used as a complementary therapy in the somewhat complicated management of hypertension.

Keyword: Hypertension; Blood pressure; Qigong; Complementary therapies; Systematic review; Meta-analysis randomized controlled trials; Trial sequential analysis