

## Effects of Self-Management Programs on Blood Pressure Control, Self-Efficacy, Medication Adherence, and Body Mass Index among Older Adult Patients with Hypertension: Meta-Analysis of Randomized Controlled Trials

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**Abstract :** Background: Self-management was described as a potential strategy for blood pressure control in patients with hypertension. However, the effects of self-management interventions on blood pressure, self-efficacy, medication adherence, and body mass index (BMI) in older adults with hypertension have not been systematically evaluated. We evaluated the effects of self-management interventions on systolic blood pressure (SBP) and diastolic blood pressure (DBP), self-efficacy, medication adherence, and BMI in hypertensive older adults. Methods: We followed the recommended guidelines of preferred reporting items for systematic reviews and meta-analyses. Searches in electronic databases including CINAHL, Cochrane Library, Embase, Ovid-Medline, PubMed, Scopus, Web of Science, and other sources were performed to include all relevant studies up to April 2019. Studies selection, data extraction, and quality assessment were performed by two reviewers independently. We summarized intervention effects as Hedges' g values and 95% confidence intervals (CI) using a random-effects model. Data were analyzed using Comprehensive Meta-Analysis software 2.0. Results: Twelve randomized controlled trials met our inclusion criteria. The results revealed that self-management interventions significantly improved blood pressure control, self-efficacy, medication adherence, whereas the effect of self-management on BMI was not significant in older adult patients with hypertension. The following Hedges' g (effect size) values were obtained: SBP, -0.34 (95% CI, -0.51 to -0.17,  $p < 0.001$ ); DBP, -0.18 (95% CI, -0.30 to -0.05,  $p < 0.001$ ); self-efficacy, 0.93 (95%CI, 0.50 to 1.36,  $p < 0.001$ ); medication adherence, 1.72 (95%CI, 0.44 to 3.00,  $p=0.008$ ); and BMI, -0.57 (95%CI, -1.62 to 0.48,  $p = 0.286$ ). Conclusions: Self-management interventions significantly improved blood pressure control, self-efficacy, and medication adherence. However, the effects of self-management on obesity control were not supported by the evidence. Healthcare providers should implement self-management interventions to strengthen patients' role in managing their health care.

**Keywords :** self-management, meta-analysis, blood pressure control, self-efficacy, medication adherence, body mass index

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