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A Systematic Review and Meta-Analysis of Self-Care Practice among Hypertensive Patients in Ethiopia

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Background: In developed and developing countries including Ethiopia hypertension is a serious public health concern. As the consequence, a massive self-care practice is necessary with the domains self-care practice including adherence to medication, physical activity, weight management, low salt diet, non-smoking, moderate alcohol usage, and dietary management is required. However, there is no nation-wide study on hypertension self-care practices in Ethiopia. This meta-analysis, therefore, aims to estimate the pooled level of self-care practice among individuals living with hypertension in Ethiopia.

Methods: Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guideline was used to report this systematic review and meta-analysis. We systematically searched the databases: PubMed /MEDLINE, EMBASE, Google Scholar, and Science Direct for studies conducted in Ethiopia. All observational studies published until July 2020 was included. Data were analyzed Using R 3.5.3 software, and the pooled prevalence with 95% confidence intervals (CI) was presented using tables and forest plots. The presence of statistical heterogeneity (I²) within the included studies was evaluated. We used a funnel plot to identify evidence of publication bias. The random-effects meta-analysis model was employed to estimate the pooled proportion of good hypertension self-care practices.

This was submitted for registration with the International Prospective Register of Systematic Reviews (PROSPERO) in March 2020 and accepted with the registration number: CRD42020175743 (<https://www.crd.york.ac.uk/PROSPERO>).

Results: In our search databases produced 356 papers. Twelve of these papers were full-fill the inclusion and were found suitable for the review. The total populations in this study were 3,938. Off these hypertensive populations 44% (95% CI [34; 53]) had good self-care practice. The subgroup analysis for each component of self-care practice was done. The subgroup analysis of good adherence to low-salt diet, alcohol abstinence, medication adherence, non-smoking, physical exercise, and weight management were 52 % (95% CI [39; 66]), 77% (95% CI [69; 88]), 65% (95% CI [45; 85]), 92% (95% CI [88; 95]), 43% (95% CI [30; 56]) and 51% (95% CI [32; 69]) respectively. In conclusion, nearly half of patients with hypertension had good self-care practices.

Keywords: Hypertension, Self-care, Systematic review, H-SCALE, Meta-analysis, Ethiopia

Keymessages :

- To the best of our knowledge, this is the first and only systematic review and meta-analysis has focused on self-care practice among hypertensive patients in Ethiopia which important for Ethiopian policymakers.
- Nearly half of patients with hypertension had good self-care practices.
- Our findings from the meta-analysis have implications in clinical practice as it can contribute to giving attention to the prevention and care of patients with hypertension.
- Strong and reliable methodological and statistical procedures were used in this review and meta-analysis.