

ABSTRACT

Introduction

Hypertension, the leading preventable risk factor for premature death and disability, affects 1.28 billion adults aged 30–79 years globally. Two-thirds of them live in low- and middle-income countries. In Sri Lanka, one-third of adults aged 18–69 have raised blood pressure (BP) or are diagnosed with hypertension. Both pharmacological and non-pharmacological management strategies are essential for BP control. Self care in hypertension includes health-promoting practices while monitoring and managing blood pressure.

Objectives

To describe self care practices, their associated factors and to develop an intervention package to improve self care practices among hypertensive patients attending government medical clinics in Kandy district.

Methods

The first of the three components, a cross sectional analytical study of a stratified cluster sample of 1175 adult primary hypertensives. The prevalence of self care practices (smoking, alcohol consumption, salt intake, fruits and vegetable consumption, physical activity, medication adherence, and home BP monitoring) and their associated factors were assessed using an interviewer administered questionnaire. Prevalences were assessed, and multivariate regression models identified associations. Component II, the systematic review and meta analysis assessed interventions to improve self care and blood pressure control among hypertensives. Component III developed an intervention to improve the selected self care practice using the Six Steps in Quality Intervention Development framework. A qualitative study using focus group discussions and key informant interviews explored the selected self care practice and informed the development of the intervention, incorporating the behavior change wheel model. A small-scale pre and post intervention study assessed the intervention.

Results

A total of 1,107 participants (94.2% response rate, mean age 61.3 years) were included. Smoking and alcohol use were low overall (7% and 8.9%), but one-third of men smoked, and one-fourth consumed alcohol. Only 25.7% met dietary recommendations for fruits and vegetables, while 59.3% had high salt intake. The prevalence of physical inactivity

was 47.1% which was higher among females. Poor medication adherence was prevalent among 46% of patients and only 8% engaged in home BP monitoring. Those under 60 were more active but less adherent to medications. Low income and education were associated with high salt and low fruit/vegetable intake. Nuclear family status and a high waist-to-height ratio were positively associated with self care practices. Medication adherence (aOR = 2.5) and physical activity (aOR = 1.7,) were significantly associated with blood pressure control. The systematic review (31 studies) showed mean SBP and DBP reductions of -3.7 and -2.7mmHg (95% CI: -4.6 to -2.7 and -2.1 to -0.6 mmHg respectively). Nurse-led interventions had the largest effect (-7.1 mmHg of SBP). The Hypertension Medication Adherence Pillbox (H-MAP) intervention included two color-coded pillboxes, nurse-led counseling, a self-monitoring chart, and peer support session. A small-scale assessment of it demonstrated a significant improvement in medication adherence (from 46.7% to 74.1%) among hypertensive patients.

Conclusions and recommendations

The prevalence of self care practices among hypertensive patients was low. Interventions targeting self care practices improve BP control. The H-MAP intervention is an effective intervention package to improve medication adherence among hypertensive patients and large scale implementations and evaluations are recommended.

Key words

Hypertension, Self care, Medication adherence, Intervention development