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A Review of Literature on Knowledge, Attitude, Practice, and Lifestyle Modification among Hypertensive Patients

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Abstract

Hypertension is a major public health concern worldwide and is a leading risk factor for cardiovascular morbidity and mortality. Despite the availability of effective pharmacological and non-pharmacological interventions, control rates remain suboptimal, particularly in low- and middle-income countries. Lifestyle modification, self-care practices, and patient education play a crucial role in the prevention and management of hypertension. This review synthesizes existing literature on the prevalence of hypertension, knowledge, attitude, and practice (KAP) related to hypertension, lifestyle modification strategies, self-care management, and educational interventions among hypertensive patients. Evidence indicates a persistent gap between knowledge and actual practice, emphasizing the need for structured educational interventions. The findings support the development of targeted educational tools such as information booklets to enhance knowledge, improve attitudes, and promote healthy lifestyle practices among hypertensive patients.

Keywords: Hypertension, Knowledge, Attitude, And Practice (KAP), India

Introduction

Hypertension is a chronic non-communicable disease characterized by persistently elevated blood pressure and is a major contributor to cardiovascular disease, stroke, renal failure, and premature mortality. It disproportionately affects older adults and individuals with sedentary lifestyles, unhealthy dietary habits, obesity, and psychosocial stress. Lifestyle modification—including diet control, physical activity, stress management, regular blood pressure monitoring, medication adherence, and complementary practices such as yoga—forms the cornerstone of hypertension management. However, inadequate knowledge, negative attitudes, and poor self-care practices limit effective blood pressure control.

A comprehensive review of literature provides insight into existing evidence, identifies research gaps, and establishes the foundation for intervention-based studies. This review critically analyses studies related to hypertension prevalence, KAP, lifestyle modification, self-care management, and educational interventions among hypertensive patients.

Studies Related to Prevalence of Hypertension

Numerous studies have reported a high prevalence of hypertension across different populations. Saad *et al*. reported a prevalence of 11.1% among Saudi adults, with obesity, diabetes, hypercholesterolemia, and unemployment identified as major risk factors. The study emphasized the importance of lifestyle modification in hypertension prevention [1].

Studies conducted among older adults in Poland and India revealed a strong association between hypertension and body mass index, physical inactivity, age, and socioeconomic status [2, 3]. Large-scale surveys such as LASI and NFHS in India demonstrated gender-based disparities in hypertension prevalence, awareness, treatment, and control, with older women exhibiting a higher cardiovascular risk burden [4, 5].

Global studies from the Philippines, Africa, Nepal, and Guinea consistently reported high prevalence rates accompanied by poor awareness, inadequate treatment, and low control levels [7-9]. These findings highlight hypertension as a growing global public health challenge requiring population-specific preventive strategies.

Studies Related to Knowledge of Hypertension

Knowledge regarding hypertension significantly influences treatment adherence and lifestyle practices. Studies from Turkey, Greece, Ethiopia, Saudi Arabia, India, Jordan, Sri Lanka, Pakistan, and Poland revealed varying levels of hypertension knowledge among patients [14-16].

Although some populations demonstrated moderate to good knowledge, critical gaps were observed in understanding target blood pressure values, complications, medication adherence, and lifestyle modification. Lower education level, younger age, rural residence, and limited access to healthcare facilities were consistently associated with poor knowledge [16, 17, 19].

Studies Related to Knowledge and Practice

Research has consistently demonstrated a discrepancy between knowledge and actual practice. Studies from South Africa and Ethiopia revealed that although patients recognized the importance of diet modification, medication adherence, and BP monitoring, adherence to exercise and salt restriction remained low [24, 25]. These findings indicate that knowledge alone is insufficient to bring about sustained behavioral change.

Studies Related to Knowledge and Attitude

Community-based studies from Ghana and Malaysia reported adequate awareness and positive attitudes toward hypertension prevention; however, healthcare utilization and routine blood pressure screening remained poor [26, 27]. Cultural beliefs, healthcare accessibility, and trust in health systems were identified as influencing attitudes toward hypertension management.

Studies Related to Knowledge, Attitude, and Practice (KAP)

Multiple studies across China, India, Namibia, Indonesia, Malawi, Ethiopia, and Lebanon revealed moderate knowledge and positive attitudes but inadequate lifestyle practices [28-36]. Workplace-based and community-led interventions significantly improved KAP scores and blood pressure control, highlighting the effectiveness of structured interventions.

The development and validation of instruments such as the Dietary and Physical Activity Questionnaire (DPAQ) provided reliable tools for assessing KAP among hypertensive patients [34].

Studies Related to Lifestyle Modification

Diet

Dietary modification, particularly salt reduction, has been shown to significantly influence blood pressure control. Studies from India, Bangladesh, Nigeria, China, and Thailand highlighted excessive salt intake as a major barrier to hypertension control despite adequate knowledge.

Exercise

Exercise interventions, including aerobic activity, resistance training, and breathing exercises, demonstrated significant reductions in systolic and diastolic blood pressure. Meta-analyses confirmed exercise as a safe and effective non-pharmacological strategy.

Blood Pressure Monitoring

Home blood pressure monitoring and self-titration strategies improved BP control and patient empowerment, particularly when supported by healthcare professionals and community programs.

Stress Management

Mindfulness-based stress reduction and behavioral therapy significantly improved psychological well-being and blood pressure outcomes, emphasizing the role of mental health in hypertension management.

Medication Adherence

Medication adherence was strongly associated with patient knowledge, education level, and socioeconomic status. Barriers included forgetfulness, cost, and limited drug availability.

Yoga

Yoga and pranayama interventions demonstrated significant reductions in blood pressure and improvements in quality of life, supporting their role as complementary therapies.

Studies Related to Self-Care Management

Self-care practices such as diet adherence, exercise, medication compliance, and BP monitoring were generally inadequate despite reasonable knowledge levels. Family support, education, access to BP monitoring devices, and mHealth interventions were identified as key facilitators of effective self-care.

Studies Related to Risk Factors of Hypertension

Studies identified modifiable risk factors including obesity, smoking, alcohol consumption, poor diet, sedentary lifestyle, and psychosocial stress, along with non-modifiable factors such as age and family history. Early identification and continuous management were shown to reduce long-term cardiovascular risks.

Studies Related to Educational Interventions

Educational interventions based on behavioral models such as PRECEDE-PROCEED and Health Belief Model significantly improved knowledge, attitudes, self-care practices, quality of life, and blood pressure control. These findings strongly support the use of structured educational materials such as information booklets in hypertension management.

Conclusion

The review highlights that hypertension remains highly prevalent with suboptimal control globally. Although patients often possess moderate knowledge and positive attitudes, lifestyle modification and self-care practices remain inadequate. Educational interventions play a critical role in bridging the gap between knowledge and practice. The evidence strongly supports the development and implementation of structured educational tools to improve lifestyle modification, self-care, and blood pressure control among hypertensive patients.

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