Literature Review of Existing Health Promotion Programs for the Prevention of

Hypertension

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Due Date

Abstract

Purpose

The present literature review analyses health promotion interventions for primary hypertension prevention. The purpose is to review research studies about proven effective prevention methods for hypertension among various groups. This review focuses on actions going beyond education to tiers of the Health Impact Pyramid.

Data Source

An extensive literature review of the articles in PubMed, CINAHL, and Google Scholar databases was done. The criteria used when selecting articles included only primary prevention strategies, excluding research regarding hypertension control or therapy. The interventions discussed include diet modification, exercise, community, and behavior change.

Findings

This review revealed that diet modification, exercise, and behavioral interventions based on psychological theories were highly effective in preventing hypertension. It was found that policy measures, including reducing the amount of sodium in processed foods, had the greatest effect on the population. However, sustainability and adherence are the major concerns that must be addressed.

Implications for Practice

Evidence-based prevention programs should be implemented at individual, community, and policy levels. This suggests that multi-faceted strategies involving behavioural modifications and other systemic measures are the best. Future studies should address long-term effects to improve the effectiveness of interventions.

Introduction

High blood pressure is a major non-communicable disease that ranks as the leading cause of cardiovascular diseases globally. It is linked with poor health outcomes and higher mortality rates, especially in LMICs, where there might be restricted access to preventive health care. This means that to reduce hypertension, prevention should focus on risk factor reduction, not on actual treatment (Zhou et al., 2021). This literature review analyzes past health promotion programs aimed at preventing hypertension, considering food-related tactics, active living promotion, educational approaches, and community programs.

Methods

These databases, including PubMed, CINAHL and Google Scholar, were used to search for literature. The search terms included "hypertension prevention", "health promotion", "lifestyle intervention", and "community-based hypertension prevention". The articles were chosen according to their focus on primary prevention and the level of the Health Impact Pyramid that was addressed (Campbell et al., 2023). The inclusion criteria were only the peerreviewed articles and systematic reviews published in the last ten years. The CDC and American Heart Association websites were used exclusively for statistical purposes.

Review of Literature

1. Dietary Interventions

The other sicknesses include hypertension, which shows that there is a strong correlation between diet and health. According to the study conducted by Zhou et al. (2021), populationlevel interventions, including the promotion of fruits and vegetables and sodium reduction, reduced blood pressure. Long-term outcomes have shown that strategies like those set out in the United Kingdom to reduce the use of salt in processed foods led to reductions in hypertension rates. Likewise, a diet called Dietary Approaches to Stop Hypertension or DASH, which focuses on low sodium and high potassium intake, has been repeatedly proven effective in prevention. In this context, Charchar et al. (2024) pointed out that the efforts aimed at dietary change were more effective when supported by community mobilization and relevant policies. Specifically, subsidies for fresh produce and taxes on high-sodium foods helped maintain the nutritional gains. Nevertheless, issues like food insecurity and availability are still evident in the low-income group.

2. Physical Activity and Lifestyle Modifications

There is published evidence associating hypertension prevention with regular exercise. According to Campbell et al. (2023), the World Hypertension League and the European Society of Hypertension recommend at least 150 minutes of moderate-intensity physical activity a week to lower hypertension level. Charchar et al. (2024) pointed out that organisation-based wellness interventions with daily movement and organised exercise helped reduce hypertension risk. Selfgenerated community activities like outdoor playgrounds and affordable gym membership boosted adherence. All studies applying combined dietary and exercise approaches were most effective in achieving long-term behavioural modifications. However, Charchar et al. (2024) state that, barriers such as time constraints and lack of motivation limit participation. Behavioural interventions, including goal-setting and digital health-tracking interventions, were found to reduce several maladaptive barriers.

3. Education-Based Interventions

Education based initiatives are among the most frequently used approaches in health promotion. Azadi et al. (2021) examined the effectiveness of the HBM-based educational program regarding Preventive Health Protective Education program and revealed that it led to positive outcomes among university employees. Through perceived susceptibility, several barriers, and self-efficacy, a higher level of hypertension preventive behaviours was observed among the intervention group than control. There is nothing wrong with education but information; research has advised against the over-dependence on this means. According to Azadi et al. (2021), on the Health Impact Pyramid, there is not much that education can do when structural issues are still in place. For this reason, practices that involve entailing education with changes in policy and environment lead to improved results.

4. Behavioral and Psychological Interventions

Interventions based on psychological theories are effective in changing human behaviors about risk. Pender's Health Promotion Model has been used in a study in Iraq to assess healthpromoting activities among the employees, thus improving their diet and physical activity levelsas noted by Hussein et al. (2024). This demonstrates the importance of self-efficacy and social support in maintaining these behavioral changes. Other strategies and approaches, such as mindfulness and cognitive-behavioral approaches, were effective in the interventions. Stress has been identified to cause high blood pressure, and psychosocial programs were beneficial in improving control of BP.

5. Community-Based Programs

Moreover, the community-level interventions are more strategic regarding populationlevel change. According to Campbell et al. (2023), the Guide to Community Preventive Services, it has been identified that multiple types of interventions are more effective in dealing with hypertension, including increasing access to healthy foods, free health checkups, and encouraging people to have an active lifestyle. In rural areas and underprivileged settings, access to health care is limited; mobile health clinic community health worker models have significantly helped improve preventive health services utilization as noted by Campbell et al. (2023). For example, a community-based education project in Latin America achieved a 15% decrease in high blood pressure simply by changing people's diets, encouraging physical activities and changing policies at the community level. However, sustainability remains a challenge. Some of the community programs are funded for a short period, and due to this, the integration of policy is essential to sustain the programs.

Clinical Implications

These results demonstrate the need for nurse-managed, integrated, and complex interventions in the fight against hypertension. Efficient interventions are comprehensive and combine educational activities with environmental and policy ones to achieve long-term health improvement. Education is not very effective unless combined with community changes that target the social determinants of health, like nutrition, physical environment, and healthcare (Azadi et al., 2021). The most effective interventions are complex, including community, workplace, and policy interventions to reduce sodium intake. Still, these approaches need to be better designed for certain population groups in terms of cultural, economic, and geographical contexts that affect the implementation of the interventions and their sustainability.

As for the limitations, more studies should continue to find more effective models that can be implemented across different populations to prevent the disease in various strata of society. However, there is a need to consider other approaches, such as Health Informatics, which involves digital health and mobile health technologies to boost engagement and transformation (Azadi et al., 2021. Most importantly, there is a need to link knowledge about individual-level behavior modification to the structural factors related to hypertension (Azadi et al., 2021). The government and healthcare entities, therefore, require enacting policies that can encourage and advance preventive health care while at the same time providing people with the information and tools for positive lifestyle changes. For a long-term change in the prevalence of hypertension, a concerted effort on different levels of society will be required.

Conclusion

Hypertension prevention entails a combination of nutrition, physical activity, awareness, and effective policies and practices. The analyzed studies show that although the individual approach is helpful, system changes are more effective. If health promotion programs aim to reach the largest number of people and influence behavior. In that case, it is important to target those aspects of health promotion that can be achieved at a low cost, are easy to access, and are culturally appropriate. Further research should be done to determine the best practices in participation and program sustainability.

References

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Appendix

Appendix: Summary of Key Interventions

Intervention Type	Description	Effectiveness	Challenges
Dietary Interventions	Reduced sodium intake,	High	Food accessibility,
	increased potassium,		compliance
	DASH diet		
Physical Activity	Structured exercise	Moderate to	Time constraints,
	programs, workplace	High	motivation
	wellness initiatives		
Education-Based	Health belief model	Moderate	Limited impact
	interventions,		without systemic
	school/workplace		support
	programs		
Behavioral/Psychological	Stress management, self-	High	Requires
	efficacy programs		individualized
			approaches
Community-Based	Health screenings,	High	Sustainability,
	community fitness		funding limitations
	initiatives, policy		
	changes		

Appendix: Summary of Reviewed Studies

Author(s	Study Title	Purpose	Methods	Key Findings	Limitations
) & Year					
Zhou et	Global	To examine	Systematic	Population-	Limited data
al. (2021)	Epidemiology	global trends	review of	wide sodium	from low-
	, Health	in	population-based	reduction and	income
	Burden, and	hypertension	studies and	increased	countries on
	Effective	and evaluate		fruit/vegetabl	long-term

	Interventions	preventive	policy	e intake	intervention
	for Elevated	interventions	interventions.	effectively	effectiveness
	Blood	•		reduce	
	Pressure			hypertension	
				rates.	
Charchar	Lifestyle	To assess the	Review of	Regular	Behavioral
et al.	Management	impact of	guidelines and	physical	adherence to
(2024)	of	lifestyle	recommendation	activity and	lifestyle
	Hypertension:	modification	s from global	dietary	changes
	International	s on blood	health	modifications	remains a
	Society of	pressure	organizations.	play a	challenge.
	Hypertension	reduction.		significant	
	Position			role in	
	Paper			hypertension	
				prevention.	
Azadi et	The Effect of	To evaluate	Quasi-	Education	Results may
al. (2021)	Education	the	experimental	significantly	not be
	Based on the	effectiveness	pretest-posttest	improved	generalizable
	Health Belief	of an	study with an	perceived	beyond the
	Model on	educational	intervention and	benefits,	studied
	Promoting	program	control group	susceptibility,	university
	Preventive	based on the	(n=128).	and self-	setting.
	Behaviors of	Health Belief		efficacy in	
	Hypertensive	Model		hypertension	
	Disease in	(HBM).		prevention.	
	University				
	Staff				
Hussein	Applying	To assess the	Randomized	Significant	Perceived
et al.	Pender's	effectiveness	controlled trial	improvements	barriers to
(2024)	Health	of a	conducted	in eating	behavior
	Promotion	behavior-	among	behaviors and	change were

based	employees in	physical	not
intervention	Mosul, Iraq.	activity levels	significantly
using		post-	reduced.
Pender's		intervention.	
Health			
Promotion			
Model.			
	based intervention using Pender's Health Promotion Model.	basedemployees ininterventionMosul, Iraq.usingPender'sHealthPromotionModel.Image: Control of the second sec	basedemployees inphysicalinterventionMosul, Iraq.activity levelsusingpost-post-Pender'sintervention.HealthPromotionModel.Image: Construction of the second sec