

# HOME EDUCATION PROGRAM FOR HYPERTENSIVE PATIENTS IN URBAN COMMUNITY OF BANGKOK

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## ABSTRACT

Background and objective: Non-pharmacological treatment has played an important role in controlling blood pressure in hypertension. In this study, Home Education Program (HE program) was designed to enable community health nurses to deliver a service in hypertension management targeting for healthy lifestyle by having healthy food, keeping more active, and releasing stress. An evaluation of the training program was undertaken. Materials and Methods: Home Education program, which was developed, comprised of 1) 5-minute for individual prescription regarding health food, 2) 10-minute exercise, and 3) 5-minute Deep breathing practice, which were modified from Thailand healthy strategies. Community health nurses' experience of the training (expectations, content, format, and relevance) was evaluated qualitatively. In-depth qualitative evaluation was undertaken via semi-structured interviews. Results: The result of this study showed that 22 participants had diagnosed to be hypertension with at least of others illness (diabetes, post stroke and dyslipidemia), most of them were women, aged range 48 to 80 years ( $66.5 \pm 8.73$  years). Conclusion: After a 4 week-home health program was implemented, blood pressure control was not changed. However, home education program (HE program) should be observed for individual self-care longer than 4 weeks and socioeconomic and cultural components should be more considered.

**Keywords:** Ageing, Hypertension, Home Education Program (HE program), Lifestyle change, urban community

## BACKGROUND

The Global Burden of Disease Study indicated that premature deaths, disability, stroke and heart disease are related the increase of blood pressure levels [1]. Many studies found that the effectiveness of blood pressure control was more likely to be found in older age and more interventions will require a reorientation of primary healthcare and management [2]. Therefore, non pharmacological treatment has played an important role in controlling blood pressure in hypertension [3, 4]. Also the role of the nurse in improving blood pressure control has complemented and supplemented that of the physician. Nurses' involvement started by measuring and monitoring blood pressure (BP), and then patient education has been expanded to become one of the most effective strategies to improve blood pressure management [5,6]. Furthermore, community health nurses in Thailand involve all aspects of primary care, including detection, diagnostics and medication management, patient education, counseling, and skill building, coordination of care, clinic or office management, population health management and performance measurement and quality improvement also referral and follow up [5]. Hence, the objective of this study was to fill the gap for improving of hypertension control via home education program by having healthy food, be keep more active, and release stress in urban community of Bangkok, Thailand.

## MATERIAL AND METHODS

A description of the HE program has been modified from Thailand Lifestyle strategies [4]. Briefly, HE program comprised of 1) 5-minute for individual prescription regarding health food 2) 10-minute exercise and 3) 5-minute Deep breathing practice. The HE program was conducted at patient's home individually after follow up at The NCD clinic in public health center 25 of Huai Kwang district. Twenty two participants from NCD clinic were selected as the sample, and each patient was confirmed to join the activity at his/her home individually. The appointment for home visit once a week for 4 weeks continually and HE program was implemented by community health nurses. After a 4 week-HE program completed, the meeting of participants was set to share their experiences about HE program and a semi-structure interview was asked for 15-20 minutes per person.

### Data analyses

SPSS statistical package Version 16 was used to analyse. Descriptive statistics, including frequency distribution, percentage, mean and standard deviation, were used to describe the following demographic characteristics of the participants. And for a part of in-depth interview, focused on HE program: - exercise and deep breathing practicing including with food intake questions were explored.

### Ethical consideration

The objectives of the study and data collection procedures were explained to all participants to indicate their willingness to participate in this study under supervised by Suan Sunandha Rajabhat University, Bangkok, Thailand.

### Results

In Table 1, the result of this study showed that 22 participants had diagnosed to be hypertension with at least of others illness (diabetes, post stroke and dyslipidemia), most of them were women, aged average  $66.5 \pm 8.73$  years (range 47 to 80 years) with BMI was average  $25.78 \pm 4.58$ .

**Table 1**  
**General characteristics (n=22)**

Variable		N	Percent
Age	> 60	16	72.7
	( $66.5 \pm 8.73$ )		
	Max 80 min 47)		
Sex	Women	15	68.2
Marital status	Couple	11	50.0
Education	Primary school	17	77.3
Occupation	Housekeeper	15	68.2
BMI	>23	16	72.7
	( $25.78 \pm 4.58$ )		
	Max 37.46 min 17.6)		
Chronic diseases	HT	1	4.5
	HT with other conditions	21	95.5
	(diabetes, dyslipidemia,		
	post stroke, thyroid disease		
	osteoarthritis of knees:-OA Knees)		

After a 4 week-home education program was implemented, blood pressure at baseline and at the end of the 4<sup>th</sup> week showed no significantly different as shown in Table 2.

**Table 2**  
**Comparison of blood pressure between before and after received a 4-week HE Program (n 22)**

Blood pressure	Mean	S.D.	SE Mean	95% CI		t	df	P-value
				Lower	Upper			
SBP1 - SBP3	3.182	11.693	2.493	-2.003	8.366	1.28	21	0.22
DBP1 - DBP3	2.455	14.305	3.050	-3.888	8.797	.81	21	0.43

SBP: systolic blood pressure; DBP: diastolic blood pressure

A part of in-depth interview, each participants confirmed all 3 components of HE program which comprised of 1) healthy food intake 2) being active by doing exercise, and 3) reducing stress by deep breathing. We found that most of participants did not change routine activity in all 3 components with the main reasons were 1) the natural of physical's degenerated in ageing, 2) the increase of hypertension in age, and 3) household's income is essential more than restrict unhealthy food.

**Table 3**  
**Routine activity of participants after received HE program**

Routine activity	N	Percent
Not change any activity	8	36.4
Unhealthy food	8	36.4
Exercise < 3 time a week	5	22.7
Stress	1	4.5

## DISCUSSION AND CONCLUSION

Twenty-two participants had been diagnosed to be hypertension with at least of others illness such as diabetes, post stroke and dyslipidemia. Women was the majority to participate in HE program with average aged  $66.5 \pm 8.73$  years and BMI was average  $25.78 \pm 4.58$ . The experiences of hypertensive patients in urban community via HE program were described in 3 components:-1) healthy food intake 2) being active by doing exercise and 3) reducing stress by deep breathing. A part of food intake and inactivity:-participants' knowledge in healthy food looked good [7, 8]. However, the practicing to select for healthy food and setting time for exercise were poor because of their low income and resident areas as we called "slum", consistent with the result finding from the study of socio-economic disparities in income, education and geographic location for hypertension among Thai adults [9,10]. Moreover, urbanization was associated with eating habit changes according to western food cultures in urban community, also participants have physical activity less than a former time because of rapid changing in modern technologies such as mobile phone, transportation and, etc. In addition, modern society in urban area had more competitive for earning to get more high income, which is one of risk factor of diseases. Individuals also more likely to be stress. Therefore, HE program was not concentrated for each person enough. However, HE Program should be considered for individual self-care which appropriate for socioeconomic, and cultural components in community.

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