The Knowledge of Blood Pressure Measurement Affecting Medication Adherence in Patients with Hypertension

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Introduction

Adherence to medication is a key factor in the blood pressure management of patients with hypertension. Female gender, education level, age, living areas, diet, exercise and missed their clinical appointment have been identified as significant predictors of medication adherence. Nonetheless, little is known regarding the association between the knowledge of blood pressure measurement and medication adherence.

Purpose

To determine whether a relationship existed between the knowledge of blood pressure measurement and adherence to medications among hypertensive patients.

Methods

- **Data from a longitudinal study investigating the effect of 16-week self-blood-pressure monitoring intervention program among hypertensive patients.**
- **Subjects were recruited from outpatient clinics of a medical center and a community health service center.**
- **All participants completed the Knowledge of Blood Pressure Measurement Scale (KBPM scale) and the Health Behaviors Scale which consists of four subscales (i.e., diet control behavior, exercise behavior, scheduled appointments, and medication adherence) .**
- **Descriptive statistics and multivariate linear regression were used for data analyses.**

Results

- **260 respondents with mean age of 63.7 were enrolled. The average score of KBPM and medication adherence were 9.1 and 17.6, respectively. More details were showed in Table 1.**
- **As shown in Table 2, after adjusting for living area, female gender, age, educational level, and health behaviors, higher knowledge of blood pressure measurement was associated with better medication adherence (p<0.01).**

Table 1

Description of demographic characteristics and measurements in study sample (N=260)

	Mean/*n*	*SD*/%
Age	63.7	12.0
Living Area, *n* (%)		
East	55	21.2
North	73	28.1
Middle	80	30.8
South	52	20.0
Gender, *n* (%)		
Male	131	50.4
Female	129	49.6
Educational Level, *n* (%)		
Gradated school or below	63	24.2
Junior high or high school	107	41.2
College or above	90	34.6
KBPM scale	9.1	1.6
Diet control behavior	19.0	4.6
Exercise behavior	6.4	(1.7)
Scheduled appointments	0.9	(0.3)
Medication adherence	17.6	(3.4)

SD= standard deviation. KBPM scale= Knowledge of blood pressure measurement scale.

Table 2

Linear regression model of medication adherence (n=260)

	B	*SE*	*t*
KBPM score	0.37	0.11	3.29**
Adjusting for			
Living Area			
East (Ref)			
North	0.05	0.53	0.09
Middle	-0.01	0.52	-0.02
South	-0.27	0.56	-0.48
Female Gender	-0.25	0.38	-0.66
Age	0.05	0.02	2.99**
Educational Level			
Gradated school or below (Ref)			
Junior high or high school	0.90	0.49	1.84
College or above	0.79	0.54	1.45
Diet control behavior	0.19	0.04	4.57***
Exercise behavior	0.36	0.11	3.27**
Scheduled appointments	3.44	0.56	6.11***

Adjusted R^2=32.0%. *SE*= standard deviation. KBPM scale= Knowledge of blood pressure measurement scale. **p< .01, ***p< .001

Conclusion

The result of the current study suggests that the knowledge of blood pressure measurement is an independent predictor of adherence to medications in hypertensive patients. Further investigation into this relation is warranted.