

A study to assess the knowledge on self-blood pressure monitoring (SBPM) among hypertensive patients in selected wards of Hospital Lam Wah Ee, Malaysia

Mini Rani Mary Beth, Shin Yan Low, Poh Yoke Chung

Abstract: Self-blood pressure monitoring (SBPM) at home creates greater awareness and patient participation in their treatment prevents hypertensive complications and helps facilitate doctors to make decisions on treatment. A study was conducted to assess the knowledge on self-blood pressure monitoring (SBPM) among hypertensive patients in selected wards of Hospital Lam Wah Ee, Malaysia. The results showed only 21 (32.3%) respondents monitored their blood pressure and 44 (67.7%) did not monitor their blood pressure at home. A total of 12 (18.4%) respondents reported that they monitored their blood pressure at home because they were aware of complications of hypertension. From those respondents who did not monitor blood pressure at home, only 13 (29.5%) respondents planned to carry out SBPM at home in the future. The overall knowledge score results for self-blood pressure monitoring showed that 6 (9.2%) subjects scored 8 and above, 42 (64.6%) scored 5-7, and 17 (26.1%) scored less than 4. The findings from the study will help the nurses understand the level of knowledge on SBPM among hypertensive patients, and include training and health education during hospitalisation reinforcing the importance and the technique of performing SBPM at home. It also helps to identify patients with poor control of blood pressure so that they can be referred to the physician for further treatment.

IeJSME 2012 6(2): 43-45

Key words: Self-blood pressure monitoring, hypertension

Hypertension is a major worldwide public health problem because of its high prevalence and association with vascular disease and premature death. According to the American Heart Association (2009), the estimated prevalence for hypertension was 73,600,000 (35,300,000 males, 38,300,000 females).¹ A higher percentage of men than women have hypertension until age 45 years. In Malaysia, 4.8 million people are estimated to be suffering from hypertension and 43% of them are aged 30

years and above. According to The Third National Health and Morbidity Survey (2006), a national population based household survey was conducted involving a total of 56,710 respondents. Among the three major ethnic groups, the prevalence of hypertension was highest among Malays (33.9%), followed by Chinese (32.4%) and Indians (29.4%).² Hypertension is a modifiable risk factor for cardiovascular disease. Self-monitoring blood pressure (SBPM) has become important in clinical practice as blood pressure monitoring devices are available widely and can be done without prescription; thus home monitoring is an easy step for hypertensive patients to monitor their blood pressure and improve their condition. Despite this, patients often cannot or inaccurately estimate their risk factors.³ Therefore, the objective of the study is to assess the level of knowledge on self-blood pressure monitoring at home among hypertensive patients. The theoretical framework used in this study is Dorothea Orem's self-care model.⁴

A survey method was used in this study. Convenience sampling technique was used to select the subjects. Sixty-five subjects who fulfilled the inclusion and exclusion criteria were selected to complete questionnaires. Inclusive criteria included patients diagnosed with hypertension for at least 6 months regardless of other health problems, patients aged 40 years and above and patients hospitalised for more than 3 days in the medical and surgical wards.

The research proposal was approved by the IMU Joint Committee of the Research and Ethics Committee. The questionnaire has two parts: Part A: demographic data and Part B: questionnaire on knowledge of SBPM. Stability reliability was done by using test retest method to check the reliability of the questionnaire. Questionnaire was validated by the head of the medical ward, one staff nurse from in-service education department and two senior staff nurses from medical ward of the hospital. The data was analyzed using SPSS (11.5). Descriptive statistics were used to summarise the demographic data and the level of knowledge.

Nursing Division, School of Health Sciences, International Medical University, Kuala Lumpur, MALAYSIA

Address for Correspondence:

Ms Mini Rani Mary Beth, Nursing Division, School of Health Sciences, International Medical University, Jalan Jalil Perkasa 19, Bukit Jalil, 57000 Kuala Lumpur, MALAYSIA
Email: mini_jackson@imu.edu.my

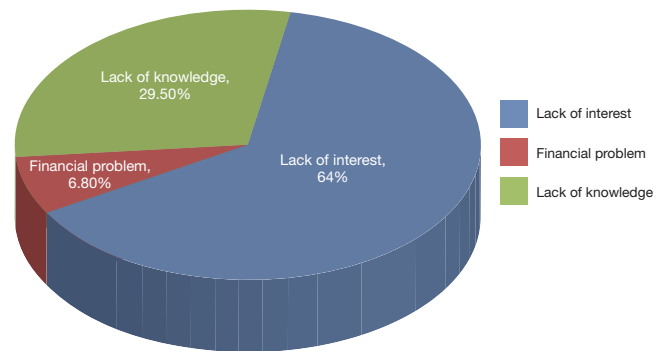
In the study group, 30 subjects (46.2%) were unemployed, 14 (21.5%) were professional workers and 21 (32.3%) were retired. The higher rates of blood pressure awareness were among patients in the age group between 60-79 years.

Table 1: Awareness and knowledge on self-blood pressure monitoring

Variables	Recalled recent BP n = 40 (61.5%)	Aware of target BP n = 44 (67.5%)
Age group (years)		
40-50	17 (26.1%)	17 (26.1%)
60-79	22 (33.8%)	25 (38.4%)
Above 80	1 (1.5%)	2 (3%)
Educational level		
None	6 (9.2%)	8 (12.3%)
Primary	14 (21.5%)	14 (21.5%)
Secondary	14 (21.5%)	18 (27.6%)
Tertiary	6 (9.2%)	4 (6.1%)
Being informed of hypertension risk		
Yes	28 (43%)	28 (43%)
No	12 (18.4%)	16 (24.6%)

Table 1 illustrates the awareness and knowledge on Self Blood Pressure Monitoring among hypertensive patients. In this study, 40 (61.5%) respondents were able to recall their recent blood pressure and 44 (67.7%) were aware of the target blood pressure, which showed that the majority of the respondents are interested in their blood pressure readings.

Figure 1: Reasons for not practising SBPM at home



In conclusion, hypertension is a common chronic disease which is also the first sign of cardiovascular diseases. Although hypertension is often described as a silent disease, many patients actively manage with their antihypertensive medications.⁵ SBPM enables the patients to gain awareness on their disease progression and the importance of long term treatment compliance. SBPM requires careful training on blood pressure measurement, instruction on recording and interpretation of blood pressure reading. Although the results demonstrated that there is satisfactory knowledge among the hypertensive patients, merely 20 (30.8%) respondents were able to score 8 and above on accurate blood pressure monitoring. Therefore further training, reinforcement and education by the nurses are needed for hypertensive patients to prevent error in measurement and help the physician to tailor the treatment accurately.

Acknowledgement

We would like to express our appreciation to International Medical University (IMU) for the provision of financial support for this research project. We would also like to extend a special thanks to Dato' Dr Yip Kok Thye, Director of Hospital Lam Wah Ee, for his approval and trust in us to conduct the study in the hospital.

REFERENCES

1. American Heart Association. Heart disease and stroke statistics-update 2009. Dallas, Texas: American Heart Association Retrieved from <http://www.americanheart.org/downloadable/heart/1240250946756LS-1982%20Heart%20and%20Stroke%20Update.042009.pdf>
2. The Third National Health and Morbidity Survey (2006). Retrieved from http://www.nih.gov.my/NHMS/abstracts_18.html
3. Lam JY, Guirguis LM. Patients' blood pressure knowledge, perceptions and monitoring practices in community pharmacies. *Pharmacy Practice* (2010). Jul-Sep; 8(3):187-92.
4. Pearson A, Vaughan B, FitzGerald M. *Nursing Models for Practice* (2005) -Third edition. Edinburgh: Butterworth Heinemann
5. Wallenius SH, Vainio KK, Korhonen MJH, Hartzema AG, Enlund HK. Self-initiated modification of hypertension treatment in response to perceived problems. *Ann Pharmacother* 1995; 29(12): 1213-7.