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Factors associated with the level of knowledge about hypertension in Malaysia: A short communication

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Abstract

Objective The aim of this study was to identify factors that have a correlation with hypertensive patients' knowledge in Malaysia.
Methods A cross-sectional survey and face-to-face interview methods were applied, and 1000 Malaysian adults were recruited to be involved in this study. The study was carried out in Hospital Kuala Lumpur, and self-administered questionnaire was adopted from previous literature study.
Key findings Most respondents were female, and the mean age was 48 years old. Analytical test showed that there is an association between gender, age, race, location, education level, and source of information and their knowledge about hypertension. The odds of knowledge were higher among female, urban, higher level of education, young (≤50 years old), and Chinese and Malay respondents and those who got their information from health professionals.
Conclusions There are several factors have a great impact on hypertension knowledge in Malaysia; hence, understanding them makes it possible for the community to change public policies and educational programmes for the population that need it the most.
Keywords factors; hypertension; knowledge; Malaysia

Introduction

During this century, hypertension (HTN) has become one of the most common public health burdens and a part of an epidemiological transition from communicable to non-communicable diseases globally. It is a major risk factor in incidence of cardiovascular diseases.[1] Recent studies, which conducted in Malaysia, have been confirmed that the prevalence of HTN is increasing in a worry trend where two out of three Malaysian adults are suffering from high blood pressure, which is affecting approximately ten million individual's adults.[2] Regarding the causes associated with failure to follow doctors' instructions, the most often cited factors are those directly related to the patient like: lack of knowledge of one's condition and disease, lack of knowledge of the nature of a chronic disease, inadequate information about the possible consequence that may happens if HTN is left untreated, low motivation for continuation of treatment and necessity to modify one's lifestyle.[3] In spite of presence of certain factors, increasing the risk of HTN, which are unavoidable, such as family history, gender, age and race, there are still others, that depend on individual's lifestyle modifications, such as weight, physical activity, alcohol intake, smoking and diet, which can be avoided. Hence, knowledge of these factors is considered a milestone in the process of preventing and control of HTN.[4] However, there are several factors, in the other hands, such as level of education, race, location and age, have an essential impact on the level of knowledge of hypertensive population.[2] Globally, several studies demonstrated that there are a great slashed in level of knowledge of hypertensive patients, but, unfortunately, there are limited researches highlighted the factors that significantly affect the knowledge level about hypertension.[4] Consequently, this study has been carried out to evaluate the factors that have a direct impact of the level of knowledge of hypertensive population in Malaysia.

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Materials and methods

An observational, analytical, cross-sectional study was conducted from November 2018 to March 2019 through the application of an anonymous survey to patients who attended Cardiology clinic at Hospital Kuala Lumpur. Non-probabilistic sampling techniques were used to distribute questionnaire forms for participants who were willing voluntarily to participate in the study. 1000 patients had fulfilled the inclusion criteria and filled up the survey forms, whereas respondents, who did not agree to be involved in the study and have certain mental health diseases such as Alzheimer, were excluded. The survey instrument was adopted from a literature study.[5] The chosen items were translated to Malay, and its reliability and validity was ensured by carrying out a pilot study. Respondents were considered hypertensive patients if they have been already diagnosed by a physician and their blood pressure is ≥130/80 following the latest recommendation of American Heart Association. Data were statistically analysed using the Statistical Package for the Social Sciences software, version 24.0, and value $P < 0.05$ was determined as statistically significant. Chi-square and logistic regression analysis were performed to predict the likelihood of association between knowledge of the participants and their demographic variables. Ethics approval was obtained from the respective committee and participants were given consent form prior to data collection, and all data were completely anonymized after getting their permission.

Key findings

A total number of 1000 eligible participants have been included, 900 of them were from urban areas, and 100 were from rural areas (Table 1). Results demonstrated that more than half of the participants (62.1%) were female, and the mean age of participants was 48 ± 11.09 years old. Most of the participants were Malay (46.7%), and 39.2% of them had secondary school education. The main two sources of their information about hypertension were health workers and television/radio by making up 22.9 % and 17.9%, respectively.

The analytical Chi-square test demonstrated that there is a statistically significant relationship between demographic factors including gender, age, race, location, education level and source of information about hypertension and level of knowledge of hypertensive participants ($P < 0.05$). Multivariate logistic regression results (Table 2) showed that being an urban citizen with higher level of education and young (≤50 years old) could increase the odds of hypertension knowledge around 2 times (OR 2.4 [1.03–4.64], OR 2.3 [1.01–4.24] and OR 2.1 [1.13–4.15]). Respondents who have been known about hypertension from healthcare individuals were OR 1.95 [1.37–2.79] times, more likely to have higher knowledge regarding their disease status. Surprisingly, the current study found that female and Chinese race participants were more odds about 2 and 3 times, respectively, to have better knowledge about HTN (OR 2.2 [1.49-4.95] and OR 3.4 [1.49-7.73]).

Table 1 Sociodemographic characteristics of hypertensive patients who responded to the survey (n = 1000)

Variables	Frequency (%)
Age	
≤50	522 (52.2)
>50	478 (47.8)
Gender	
Male	379(37.9)
Female	621 (62.1)
Race	
Malay	467 (46.7)
Chinese	288 (28.8)
Indian	198 (19.8)
Others	47(4.7)
Location	
Urban	900 (90.0)
Rural	100 (10.0)
Marital status	
Single	248 (24.8)
Married	556 (55.6)
Divorced	113 (11.3)
Widowed	83 (8.3)
Education level	
Illiterate	57 (5.7)
Primary school	122 (12.2)
Secondary school	392 (39.2)
Pre-university	246 (24.6)
University	183 (18.3)
Source of information about hypertension	
Healthcare professional	229 (22.9)
Tv and radio	179 (17.9)
Newspaper and magazine	131 (13.1)
Leaflets	66 (6.6)
School	22 (2.2)
University/college	21 (2.1)
Friends	79 (7.9)
Family	94 (9.4)
Internet	98 (9.8)
Public health campaign	81 (8.1)

Table 2 Independent predictors for hypertension knowledge

Independent variables	*P* (Chi-square)	OR	95% CI for EXP (B)	*P* (logistic regression)*
Gender (female)	0.029	2.2	1.49–4.95	0.026
Age (≤50 years)	0.0001	2.1	1.13–4.15	0.016
Race (Chinese, Malay)	0.0001	3.4	1.49–7.73	0.003
Location (urban)	0.036	2.4	1.03–4.64	0.042
Education level (University)	0.0001	2.3	1.01–4.24	0.0001
Source of Information about Hypertension (health professionals)	0.015	1.95	1.37–2.79	0.0001

*Multivariate regression.

Discussion

This study considers the first of its kind (to the best of our knowledge) to focus mainly on the factors that have a great influence on level of knowledge about hypertension in

Malaysia. This study detected that there are a significant association between the respondents' gender, age, race, location, education level and source of information about hypertension and with their hypertension knowledge. Teo and his colleagues mentioned that the level of knowledge about the disease begins to increase among younger adults and this is mainly due to ease of accessibility to the internet that enhanced their exposure to beneficial health information.[6] This point is not like what was believed in the last time by thinking that older generations were more knowledgeable about their disease in comparison with young patients. In addition, the present study demonstrated that women have tendency to learn more about their health status compared to men. This is probably because women have more healthcare habits than men.[7] Besides that, respondents with university education level were found to have more knowledge than those with primary education because of higher education level that leads to increased knowledge regarding health issues, especially when it is related to their chronic illnesses.[8] About the ethnicity, Chinese and Malay were more likely to have better knowledge compared to other as ethnicity has a great influenced on people's knowledge about health issues where the common local cultures and customs tend to have a significant contribution in making people either more or less interested in knowing about the disease they suffer from.[9] Moreover, regarding the association between level of knowledge and source of information about hypertension, a study conducted in the United Arab Emirates had also detected that various sources could contribute to hypertension knowledge. This study had demonstrated that health workers and mass media, including Tv/radio, are the main reliable source of information regarding hypertension in which they play role in giving information related to the risk of untreated blood pressure, adverse consequences of hypertension and cost-effective in hypertension management.[10] Last factor in this study that may contribute to affect the level of knowledge about hypertension is location. It can be noted that rural respondents were less knowledgeable so that they are more prone to achieve poor control of blood pressure. This could be due to poor healthcare service in the rural compared to urban areas.[2] Therefore, the current study emphasizes on the need to pay more attention on rural citizens in Malaysia to reduce the prevalent hypertension risk and improve their knowledge and adherence to medications.

Conclusion

Several factors are playing a main role with higher/lower level of knowledge about hypertension so that knowing them allows for the adaption of public policies and educational interventions for the population that most requires it.

Declarations

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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Authors' contributions

BARH designed the study and AHM conducted, analysed data, and drafted the study. AMS also analysed data and proofread the study. AB and JD reviewed and edited the drafted study. All Authors state that they had complete access to the study data that support the publication.

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