

Knowledge, attitude and practice of preventive behavior toward hypertension among Myanmar migrants in Samut Sakhon province, Thailand

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Abstract

Purpose - Hypertension is one of the most common non-communicable diseases. Over one billion people around the world have hypertension. This study examined the knowledge, attitude and practice for hypertension prevention among the Myanmar migrant workers residing in Thailand.

Design/methodology/approach - A cross-sectional study was conducted among 422 Myanmar migrants in Samut Sakhon province from April to May 2018. Face-to-face interview was done by using validated structured questionnaires. Convenient sampling technique was used. Univariate and Chi-square analysis were employed to analyze the data.

Findings - Fifty-eight percent of the respondents had poor knowledge level. Ninety-five percent did not know their own blood pressure, and 65% never checked blood pressure within last 6 months. Most of the respondents had moderate attitude and practice levels. Age ($p<0.001$), gender ($p<0.001$), marital status ($p=0.025$), education ($p<0.001$), occupation ($p<0.001$), hypertension status ($p=0.001$), family history ($p<0.001$) and diabetes status ($p=0.003$) were significantly associated with knowledge of hypertension. Age ($p=0.002$) and occupation ($p=0.050$) were associated with hypertension attitude. Age ($p=0.044$), ethnicity ($p<0.001$), education ($p=0.045$), occupation ($p<0.001$), hypertension history ($p=0.001$), family history of hypertension ($p<0.001$) and receiving hypertension information ($p=0.021$) were significantly associated with practice of hypertension prevention. There were associations between knowledge and attitude ($p=0.046$), knowledge and practice ($p<0.001$) and attitude and practice level ($p=0.046$).

Originality/value - Knowing basic knowledge, attitude and preventive practices is very important to prevent hypertension. Appropriate education and communication strategies should be suitably designed among Myanmar migrants living in Thailand.

Keywords Knowledge Attitude Practice, Hypertension, Myanmar migrants, Thailand

Paper type Research paper

Introduction

In the 21st century, non-communicable diseases (NCDs) continues to be one of the major public health challenges threatening social and economic development of the countries [1]. It is one of the most important causes of premature death worldwide responsible for around fifty percent of all deaths from heart disease and stroke [2]. Prevalence is high in low income and middle income. Approximately one in three adult has high blood pressure in the South East-Asia Region [3] Hypertension kills nearly 1.5 million people each year in the South-East Asia. Although the cause is unknown for about 95% of cases of hypertension, most of the cases share the common behavioral risk factors. Effective interventions for preventing the occurrence and management of the non-communicable diseases has proved the reduction in the burden of diseases [4]. Effective prevention and control of NCDs is a national public health priority for Thailand nowadays [5, 6]. Thailand's largest migrant population are Burmese 86% among 3.7 million total migrant population [7]. This study examines the knowledge, attitude and preventive behavior towards raised blood pressure among Myanmar migrants in Samut Sakhon province, Thailand.

Methods

A cross-sectional study, using the suitably designed and validated interviewer administered questionnaire, was conducted among the Myanmar migrants (age >18 years) residing in Samut Sakhon province from April to May 2018. Those who are less than one month stay, not giving consent, cannot communicate well and mentally-ill ones with medical evidence were excluded from the study. The sample size is calculated by using the Cochran formula considering the 95% confidence interval. The final sample size was 422 after adding non-response rate of 10%. Mahachai sub-district, Samut Sakhon province was purposively selected due to large populations of Myanmar migrants there. Convenient sampling method was used. Univariate analysis and bivariate analysis (Chi-square and Fisher exact test) were analyzed using SPSS 22 (university license).

The content validity of the questionnaire is tested by reviewing the previous literatures and consulting with three experts. Structured questionnaire has four parts; socio demographic characteristic, knowledge of hypertension, attitude towards hypertension and practice of preventive behavior towards hypertension. The knowledge section includes general knowledge for normal values for blood pressure, symptoms of hypertension, treatment and diagnosis, risk factor and specific knowledge about preventive measures. The attitude section explores about susceptibility, severity, and benefits of prevention towards hypertension. Practice section aimed to find out the preventive practice of hypertension such as physical activity, dietary pattern of salt, fatty food, preserved food, smoking and moderation of alcohol and stress management and checking of blood pressure during the past six month. The scores were categorized as poor moderate and good level by using the blooms criteria for knowledge and mean score for attitude and practice level. Pilot test was conducted with 30 Myanmar migrants (10% of sample population) in Samut Prakan where the characteristics of respondents is similar to that in Samut Sakhon. Regarding reliability, the internal consistency of the rating scales was tested using the Cronbach's alpha coefficient and Kuder-Richerson test for knowledge questions.

This research is approved by the Ethical Committee of Chulalongkorn University (COA. NO 093/2018). Informed consent were obtained from the participant who voluntarily take part in the research.

Results

Socio-demographic characteristics

There are 219 males (52%) and 203 females (48%). Mean age of the respondent is 30 years. One third of the respondents was between 18-34 years of age. Majority of the respondents are Burma ethnic (74%) followed by Mon, Karen and others. 75% of the participants are married. Most of the respondents have attended secondary school (63%). One fifth of the respondents (18.5 %) had high school level education. 92% were employed in factories and construction sites. 96% are registered Myanmar migrant and 88% have their health insurance. Among the 422 participant 401 (95%) do not know their own blood pressure. Seven percent of the study population has medical history of hypertension diagnosed by health worker and 6.4% had DM. 27 % of the study population had hypertension in their family.

Knowledge of Hypertension

Among the 422 respondents, majority (58%) had poor level of knowledge, 36% had moderate knowledge and only 6% has good knowledge. Three fifth of the participant answered correctly about the non-communicable nature of the hypertension and normal blood pressure. 91% thinks that hypertension always give symptoms. Seventy-four percent of the population thought that hypertension can be

treated by medication only. One third of the population does not know that reducing alcohol and coping with stress can prevent hypertension. More than half of the participants (54%) received information about hypertension. The source is mostly from television and radio (75%) followed by health workers (70%), and friends (41%), Table 1.

Attitude towards Hypertension

The mean attitude score is 46.63 and standard deviation 2.98. The majority of the respondents (82.7%) has fair attitude towards hypertension. One out of ten participant has good attitude and 6.9% presented with poor attitude levels. Forty-seven percent of the participant answered uncertain about the individual risk of getting hypertension. More than half of the respondent are uncertain about the genetic risk. More than forty percent are unsure about the complication of hypertension. Nearly half of them agreed that prevention is important. Majority of them agreed on the preventive behavior towards hypertension, Table 2.

Table 1. Frequency and distribution of knowledge of hypertension

Statement	n=422(%)	
	Correct	Incorrect
Hypertension is a non-communicable disease	257(61)	165(39)
Normal blood pressure of a person is 120/ 80 mmHg	252(60)	170(40)
Sign and symptoms		
Persons with high BP always feel symptoms*	39(9)	383(91)
Nose bleeding and headache can be a sign of very high blood pressure	155(36)	267(63)
Diagnosis and treatment		
A person is diagnosed as hypertension if their systolic blood pressure is 140 or higher or their diastolic is 90 or higher on two separate occasions	206(49)	216(51)
Hypertension can be treated by medications only*	111(26)	311(74)
Hypertensive patients need to take medications for life long	191(45)	231(55)
Following persons are at risk of Hypertension		
Diabetic patient	258(61)	164(39)
Overweight persons	270(64)	152(36)
Those with family history of hypertension	158(37)	264(63)
Those who took regular physical exercise*	243(58)	179(42)
Hypertension can be prevented by		
Physically inactivity*	218(52)	204(48)
Eating salty food and high fatty food*	267(63)	155(37)
Large consumption of vegetables and fruits	256(61)	166(40)
Reducing the amount of alcohol drinking	303(72)	119(29)
Cessation of smoking	268(64)	154(36)
Reducing stress by meditation	291(69)	131(31)

Table 2. Frequency and distribution of attitude regarding hypertension

Attitude questions	n=422(%)				
	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
1. I think I can get hypertension	66(15.6)	126(29.9)	201(47.6)	20(4.7)	9(2.1)
2. I think that if parents are hypertensive, children will have high risk of having disease	30(7.1)	131(31)	233(55.2)	22(5.2)	6(1.4)

(continued)

Table 2. (continued)

Attitude questions	n=422(%)				
	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
3. If I eat a lot of salty snack and processed meat, I am susceptible to hypertension	91(21.6)	179(42.4)	144(34.1)	6(1.4)	2(0.5)
4. I think that hypertension is a chronic disease and it has to be treated and controlled throughout the entire life	62(14.7)	227(53.8)	96(22.7)	32(7.6)	5(1.2)
5. I think hypertension can lead to fatal serious complications	68(16.1)	186(44.1)	155(36.7)	12(2.8)	1(0.2)
6. I think untreated hypertension does not cause stroke*	26(6.2)	76(18)	182(43.1)	112(26.5)	26(6.2)
7. I think untreated hypertension can give rise to heart attack	66(15.6)	155(36.7)	177(41.9)	18(4.3)	6(1.4)
8. In my opinion, prevention of hypertension is not much important*	14(3.3)	91(21.6)	41(9.7)	201(47.6)	75(17.8)
9. I believe that less eating of deep fried food and salty food can help us prevent hypertension	94(22.3)	264(62.6)	38(9)	23(5.5)	3(0.7)
10. Exercise regularly has important benefit in prevention of hypertension	101(23.9)	270(64)	39(9.2)	12(2.8)	0
11. Hypertension can be prevented by stoppage of smoking	47(11.1)	240(56.9)	97(23)	32(7.6)	6(1.4)
12. I believe limiting amount of alcohol drinking can prevent hypertension	46(10.9)	242(57.3)	105(24.9)	24(5.7)	5(1.2)
13. In my opinion, reducing stress by meditation is not effective way for preventing hypertension*	32(7.6)	167(39.6)	58(13.7)	130(30.8)	35(8.30)

Table 3. Frequency and distribution of practice of preventive behavior regarding hypertension

Statement	n=422(%)		
	Regularly	Some-times	Never
I take part in moderate physical activity (e.g. 30 min of brisk walking, Gardening most of the day in a typical week)	81(19.2)	246(58.3)	95(22.5)
I take part in vigorous physical activity (e.g. 10 minutes of fast cycling, carrying heavy loads most of the day in typical week)	74(17.5)	171(40.5)	177(41.9)
I choose fresh food rather than processed foods (e.g. canned or frozen goods) when available	142(33.6)	213(50.5)	67(15.9)
I eat high salt foods (salty snack, salted dried fish)*	64(15.2)	276(65.4)	82(19.4)
I eat less food that contain high fat (red meat, butter)	86(20.4)	267(63.3)	69(16.4)
I add extra salt or soy sauce to the meal right before eating it*	53(12.6)	174(41.2)	195(46.2)
I choose boiled, baked or steamed instead of deep fried food	29(6.9)	286(67.8)	107(25.4)
I eat various types of fruits and vegetables in a day	187(44.3)	222(52.6)	12(2.8)
I smoke at least 1 cigarette per day*	62(14.7)	84(19.9)	276(65.4)
I drink more than one standard alcohol daily (2 glass or less for men 1 glass or less for women)*	30(7.1)	136(32.2)	256(60.7)
I try to stay away from anything or anybody that causes any kind of stress	163(38.6)	207(49.1)	52(12.3)
I practice meditation	23(5.5)	250(59.2)	149(35.3)
I check my blood pressure within last six month	29(6.9)	118(28)	275(65.2)

Practice of preventive behavior regarding hypertension

Mean practice score was 26.98 and SD was 3.74. Most of the respondents has moderate practice level (83.2%). Regarding physical activity, 58.3% of the respondent sometimes do moderate physical activity and 41.9% never do vigorous physical activity. 50.5% choose fresh food over processed food. 65.4% sometimes eat salty food. 14.7% are daily smoker and 7.1% drink more than one standard drink daily. About 65.2% of the respondents never checked their blood pressure within last six months, Table 3.

Association between independent variables and practice of preventive behavior

Fifty-eight percent of the respondents have poor knowledge level. Ninety five percent do not know their own blood pressure and sixty five percent never checked blood pressure within last six months. Most of the respondents have moderate attitude and moderate practice level regarding hypertension. Age ($p<0.001$), gender ($p<0.001$), marital status ($p=0.025$), education ($p<0.001$), occupation ($p<0.001$), hypertension status ($p=0.001$), family history ($p<0.001$), and diabetes status ($p=0.003$) are significantly associated with knowledge of hypertension. Age ($p=0.002$), and occupation ($p=0.050$) of the participants are associated with attitude level. Age ($p=0.044$) ethnicity ($p<0.001$), education ($p=0.045$), occupation ($p<0.001$), medical history of hypertension ($p=0.001$), family history of hypertension ($p<0.001$) and receiving hypertension information ($p=0.021$) are significantly associated with practice of preventive behaviors regarding hypertension. There are association between knowledge and attitude ($p=0.046$), knowledge and practice ($p<0.001$), and attitude and practice ($p=0.046$) respectively, Table 4.

Table 4. Relationship between independent variables and practice (n=422)

	Practice level			p-value
	Poor n (%)	Moderate n (%)	Good n (%)	
Age (years)				0.044*
18-24	5 (4.5)	100(89.3)	7(6.3)	
25-34	11 (5.3)	174(84.5)	21(10.2)	
35-44	12 (12.6)	71(74.7)	12(12.6)	
≥45	2 (22.2)	6(66.7)	1(11.1)	
Gender				NS
Male	18 (8.2)	179(81.7)	22(10)	
Female	12(5.9)	172(84.7)	19(9.4)	
Ethnicity				0.000*
Burma	10(3.2)	269(86.2)	33(10.6)	Fisher exact
Shan	3(42.9)	4(57.1)	0(0)	
Mon	13(22.4)	41(70.7)	4(6.9)	
Karen	3(7.7)	34(87.2)	2(5.1)	
Others	1(16.7)	3(50)	2(33.3)	
Marital status				NS
Single	5(6.1)	71(86.6)	6(7.3)	Fisher exact
Married	21(6.6)	264(83.3)	32(10.1)	
Widow	0(0)	6(100)	0(0)	
Divorced/ Separated	4(23.5)	10(58.8)	3(17.6)	
Education				0.045*
Never went to school	3(23.1)	9(69.2)	1(7.7)	Fisher exact
Primary or monastery education	10(17.1)	44(75.9)	4(6.9)	

(continued)

Table 4. (continued)

	Practice level			p-value
	Poor n (%)	Moderate n (%)	Good n (%)	
Secondary or middle school	14(5.2)	227(84.7)	27(10.1)	
High School level	3(3.8)	66(84.6)	9(11.5)	
University level	0(0)	5(100)	0(0)	
Occupation				0.000*
Unemployed	3(21.4)	10(71.4)	1(7.1)	Fisher exact
Construction worker	7(4.3)	154(94.5)	2(1.2)	
Agricultural worker	0(0)	8(88.9)	1(11.1)	
Factory worker	19(8.5)	170(75.9)	35(15.6)	
General worker	1(9.1)	9(81.8)	1(9.1)	
Others	0(0)	0(0)	1(100)	
Income				
Have income	27(6.6)	343(83.7)	40(9.8)	Fisher exact
No income	3(25)	8(66.7)	1(8.3)	
Registration status				NS
Registered	27(6.7)	339(83.9)	38(9.4)	Fisher exact
Unregistered	3(16.7)	12(66.7)	3(16.7)	
Health insurance				NS
Insured	24(6.4)	314(84.2)	35(9.4)	Fisher exact
Not insured	6(12.2)	37(75.5)	6(12.2)	
Hypertension history				
HTN(+)	8(25.8)	21(67.7)	2(6.5)	0.001*
HTN(-)	22(5.6)	330(84.4)	39(10)	Fisher exact
Family history of HTN				
Yes	4(4.7)	65(76.5)	16(18.8)	0.000*
No	11(4.9)	199(88.8)	14(6.3)	
Don't know	15(13.3)	87(77)	11(9.7)	
Diabetes mellitus history				
DM(+)	2(7.4)	24(88.9)	1(3.7)	NS
DM(-)	28(7.1)	327(82.8)	40(10.1)	Fisher exact
Knowledge of hypertension				
Poor knowledge	19(7.8)	214(88.1)	10(4.1)	0.000*
Moderate knowledge		120(77.9)	23(14.9)	
Good knowledge	0(0)	17(68)	8(32)	
Attitude towards hypertension				
Poor attitude	3(10.3)	25(86.2)	1(3.4)	0.046*
Moderate attitude	25(7.2)	294(84.2)	30(8.6)	
Good attitude	2(4.5)	32(72.7)	10(22.7)	

Discussion

Mean age of the study population is 30 years and 206 (76.0%) of the respondents were between 18 and 34 years of age which is consistent with the 2017 UN migration report which stated that majority of international migrants are working age group (age between 20 to 64).

Age is significantly associated with practice of hypertension prevention with *p*-value 0.044. Younger age group were least to practice preventive life style behavior which is consistent with the previous studies done in Canadian population ($p < 0.050$) [8]. Young age is significantly associated with low level of knowledge of hypertension with *p*-value 0.000 which is consistent with the previous studies done in general African-American community [9]. Similar findings were also seen in general population of Mongolia. (*p*-value < 0.050) [10] and India [11]. Most of the respondents are young age group (76% are between 18-34 years of age) this may explain their low attention to the hypertension.

Knowledge is significantly associated with gender at p -value 0.000. Male has the better knowledge score than female. The similar finding was seen in the study among hypertensive patients in Nepal (p -value <0.001) and Pakistan ($p <0.030$) [12, 13]. Participants with high level of education is found to have good practice level than the less educated ones which is significant at p -value 0.045. This finding is also consistent with previous studies done in Ethiopia [14]. Family history of hypertension has association with practice of hypertension prevention behavior ($p<0.001$) and knowledge of hypertension. ($p=0.000$). To the authors knowledge, there is still no detailed analysis of the association between family history of hypertension with practice of prevention. Therefore, it can be considered as an opportunity for involving direct family members in health education, as well as for early interventions and improved control of hypertension. The source of information is mostly from television and radio (75%) followed by health workers (70%), family and friends (41%). The similar findings for source of information is seen in a study done in a general population of India [11] Respondents attitude is found to be significantly associated with age ($p=0.002$) and occupation ($p=0.050$). Employed group showed higher perceived effectiveness in the study among Mongolia general population($p=0.050$) [10].

This study revealed that there is significant association between the level of hypertension knowledge and attitude ($p=0.046$), knowledge and practice ($p<0.001$), and attitude and practice ($p=0.046$) respectively. Similar findings were found in a the study done in Malaysia where there were significant association between attitude and knowledge, practice and knowledge and practice and attitude [15]. Alfred Adler in theory of individual psychology emphasized that a person's attitude toward the environment had a significant influence on his or her behavior [16].

Conclusion

Myanmar is now facing double burden of diseases - communicable diseases and non-communicable diseases. Hypertension is one of the important health problems and the priority actions are needed to develop with the aim to prevention and control of hypertension. Appropriate lifestyle adoption is the first step of prevent hypertension. Despite the limitations, this study provides an insight to the basic knowledge, risk behaviors regarding hypertension in Myanmar migrant population in Samut Sakhon province. Based on these findings, population should be educated on the risk factors, presenting features and normal value of hypertension smoking and alcohol drinking is highly prevalent in the Myanmar migrant community. In contrast to other practices, knowing of own blood pressure and regular blood pressure checking is lacking in most of the people. Promoting public education in the work place would be beneficial for raising community awareness and changing health risk behaviors. As Thailand has developed migrant friendly health services in some areas and continue to invest in its health care system, screening program and prevention strategies should also be implemented for non-communicable diseases. Appropriate information, education and communication strategies should also be designed and implemented to avoid unhealthy lifestyles and promote healthy practices.

Limitation

Lack of adequate similar studies makes comparison difficult for reference. High mobility and limited available time of the respondents are big challenges for the interviewers. Since the researcher use convenient sampling method, the finding might not be representative enough for all the Myanmar migrants who are living in Thailand. Socially acceptable answers may not reflect the actual practice over time.

There may be the denial of poor practices from the respondents, which affects the result of the study.

Recommendation

Although the practice and attitude were fair, knowledge of hypertension is poor across the population which reflect the need for health educating program. Intervention program based on the result of this study can also be encouraged. The prevalence may be more than the reported value as this study is not actually measuring the blood pressure. Therefore, prevalence of hypertension should be assessed in the future studies and specific barriers for preventive behavior should be identify.

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