พฤติกรรมการจัดการตนเองของผู้ป่วยโรคความดันโลหิตสูง โรงพยาบาลจีลีปู ประเทศภูฏาน

Self-management behaviors of essential hypertension patients in Gelephu Hospital, Bhutan

บทความวิจัย
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บทคัดย่อ

การวิจัยเชิงพรรณนานี้ มีวัตถุประสงค์ เพื่อศึกษาพฤติกรรมการจัดการตนเองของผู้ป่วยโรคความดันโลหิตสูงที่มารับการตรวจที่แผนกผู้ป่วยนอก โรงพยาบาลจีลีปู ประเทศภูฏาน กลุ่มตัวอย่างเป็นผู้ป่วยโรคความดันโลหิตสูงที่มีอายุ 18 ปีขึ้นไป จำนวน 350 คน เก็บข้อมูล โดยใช้แบบสอบถาม ระหว่างเดือนพฤษภาคม ถึงเดือนกรกฎาคม พ.ศ. 2557 วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ผลการศึกษาพบว่า ระดับพฤติกรรมการจัดการตนเองของผู้ป่วยโรคความดันโลหิตสูง ส่วนใหญ่อยู่ในระดับปานกลาง (ร้อยละ 82.6)

คำสำคัญ : การจัดการตนเอง, โรคความดันโลหิตสูง, ผู้ป่วยประเทศภูฏาน

Abstract

This descriptive study aimed to examine self-management behaviors among patients with essential hypertension attended outpatient clinic at Gelephu Hospital in Bhutan. The sample was 350 essential hypertension patients aged 18 years and over. Data were collected during May to July 2014 by using self-management questionnaires. Descriptive statistics were used for data analysis. Results revealed that 82.6% of patients with essential hypertension had moderate levels of self-management behaviors.

keywords: self-management, essential hypertension, Bhutanese patients

Background and significance

Hypertension is one of the chronic health problems. It was the 5th leading cause of morbidity and mortality at Gelephu Hospital.[1] Poor control of blood pressure is the main cause of increasing morbidity and mortality of people with hypertension.[2-3] It has been known that one of the factors of poor control was the patient's lack of self-management in terms of pharmacological treatment and changes of lifestyles[4.] Self-management of hypertension by exercising, controlling weight or changing habits, so that they can control BP effectively, is required, to make patients healthy.[4.] The significant causes of higher rates of disability and death were from stroke, heart failure or renal failure due to lack of self-management among hypertensive patients[4.]

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It was observed that self-management behaviors of hypertension patients of Gelephu hospital were found to be non adherence to recommended treatment. They were not modifying their lifestyles and not changing their dietary habits. Thus, they were having uncontrolled blood pressure (BP). The burden of hypertension is increasing in both rural and urban Gelephu due to unhealthy diet, sedentary lifestyle, and lack of self-management of high blood pressure. For people with hypertension, lifestyle management and antihypertensive treatment are lifetime efforts in which patients themselves play a crucial role to manage the disease and achieve good blood pressure control.[5.] The success of strategies for high BP management will ultimately depend upon patient self-management or the ability and willingness of the patient to change and maintain certain behaviors[4.]

Hypertensive patients need to self-manage their BP with pharmacological and non-pharmacological treatment. In order to control BP effectively and decrease the risk of associated health complications, the JNC 7 (Seventh report of Joint National Committee) guidelines recommended that patients maintain: (1) weight reduction, (2) DASH diet, (3) lower salt intake, (4) regular physical exercise, (5) moderation of alcohol consumption, (6) taking antihypertensive medication and (7) stress management[5.]

Another important factor which will enhance self-management behavior, is seeking health information. Patients' information seeking has been viewed as a key component of self-management behavior.[6.] Self-management in this study refers to the behavior necessary to be executed by hypertension patients to control their BP. According to JNC 7 recommended guideline, self-management behavior is a group of activities such as engaging in exercise, reducing weight, intake of low salt, limitation of alcohol intake, stress management, consuming DASH diet and taking antihypertensive medication to control BP effectively with seeking health information.

Despite the growing evidence on the usefulness of self-management and the existence of several efficacious pharmacologic and non pharmacologic approaches to hypertension management, hypertension control is still inadequate with less controlled blood pressure observed among Bhutanese hypertensive patients. However, the hypertension control and the self-management behaviors including seeking health information of essential hypertensive patients of Gelephu hospital were unknown.

Many studies have been conducted on self-management of essential hypertensive patients. To gain insight, recognition of gaps in essential hypertensive patients' self-management level can help to plan nursing intervention for this group. Furthermore, the development of self-management education program will help patients to prevent from unwanted complications and reduce burden on health care system of Bhutan. Therefore, the researcher is interested to know the self-management level of essential hypertensive patients in Gelephu hospital. The purpose of the study is to examine the level of self-management behavior of essential hypertensive patients of Gelephu hospital.

Method

Descriptive research design was used to examine the self-management behaviors of the essential hypertension patients.

Population and sample: The population was essential hypertension patients who came for follow-up at OPD clinic of Gelephu hospital. The sample size calculated by using Yamane's formula was 350 hypertension patients. The inclusion criteria were: (1) having a diagnosis of hypertension for at least 6 months; (2) aged 18 years old and above; and (3) able to communicate in Bhutanese. The exclusion criteria were: patients who were on traditional medications; and patients with co-morbids, such as diabetes and severe heart failure, hypertensive crisis, and critically ill.

Research Instrument: The instrument used in this study was modified from Feng (2009)[7] that conducted a research in China. Some questions of the questionnaire were modified based on Bhutanese context and JNC7 recommended guidelines. The questions were modified from 23 items to 25 items. There are eight domains of self-management behaviors: (1) physical activity; (2) lower salt intake; (3) moderation of alcohol consumption; (4) weight reduction; (5) DASH diet; (6) stress management; (7) antihypertensive medication, and (8) seeking health information. Content validity was approved by five experts and yield a content validity index, (CVI) of 0.8-1.0 with a Cronbach's alpha coefficient of 0.83 achieved from reliability evaluation.

Ethical Issues: To protect the human rights, this research was approved by the ethical committee from the research ethics board of health (REBH), Bhutan and by the medical superintendent and head of the Gelephu hospital.

Data collection: Data was collected between May 12 - July 9, 2014. The researcher had met the essential hypertension at out-patient department and then requested for participation. Questionnaire was given to the patients and then answered the questionnaire. For patients who could not read, the researcher read all questions to them and then they answered.

Data analysis: The descriptive statistics were used to analyze data, demographic data and self-management behaviors. The level of self-management behaviors was divided into three levels. The score from the questionnaire was ranged from 25 to 125. The researcher used mean scores and standard deviations for dividing three levels of self-management behaviors. There were: 1) Poor level, the score was less than 65; 2) Fair level, the scores were from 65 to 94; and 3) Good level, the score was more than 94.

Results

1. Demographic characteristics

Most of the sample were female (68%), aged above 50 years old (60.9%), lived in rural areas (65.1%), were married (84.3%), were housewives (47.4%), and were unable to read and write (65.7%), as shown in Table 1.

Table 1 Demographic characteristics. (N=350)

Demographic characteristics		Number	Percentage
Gender	Male	111	31.7
	Female	239	68.3
Age (year)	18-49	137	39.1
	50 years and above	213	60.9
Residence	Urban	122	34.9
	Rural	228	65.1
Marital status	Single	7	2.0
	Married	295	84.3
	Divorced	11	3.1
	Widow/Widower	37	10.6
Education Level	Illiterate (unable to read and write)	230	65.7
	Non-Formal Education	36	10.3
	Junior High School	53	15.1
	High School	26	7.4
	University	5	1.4
Occupation	Retired	30	8.6
	Housewives	166	47.4
	Farmers	118	33.7
	Government Servants	36	10.3

2. Self-management behaviors

The self-management behaviors were shown in table 2. According to the self-management behaviors items, the majorities of participants (82%) were never engaged in regular exercise, never went for a walk or went jogging daily (36%), and never engaged in gardening or did yard work daily (35.4%). Regarding the management of stress, it was found that 71.4% of the sample never managed their stress in the healthy ways, for instance, by listening to music, by watching television, by meditation or by praying. Furthermore, it was found that most of patients never managed their stress by taking a small nap in between their work (81.7%). In terms of taking antihypertensive medication, most of the sample never asked physicians or pharmacists regarding the side effects of medications and how to avoid them (76.8 %). The majorities of patients were found to take medications as prescribed by doctors (94%), however, 87.7% (never) asked or read about the side effects when starting with new prescription medications. It was found that 62.9% were found to follow-up on time for medication, and 54 % (never) came to hospital for BP checked up when they had side effects like headache and giddiness to rule out other causes. The majority of sample regularly took medications without forgetting (73.1 %) and (always) took medications without stopping suddenly (79.4%).

Surprisingly, it was found that 68.9% of patients were discovered to stop alcohol consumption (always). Regarding DASH diet, 67.1% of participants followed a low fat diet (always), 43.4% (never) reduced drinking butter tea or sweet tea, 31.4% of the participants consumed pork, chicken, mutton or beef (sometimes), 33.7% (always) ate fruits and vegetables whenever possible, more than half (51.4%) reduced consumption of "emadatsi" and the amount of rice and eating 3 times per day. Regarding the salt intake, the majority (67.4%) of participants always followed a low salt diet, 68% reduced dry fish consumption and 54.3% participants never asked about or read to choose food products those are lower in sodium.

Regarding seeking health information for better management of BP, the majority of participants (67.7%) never sought health information from physicians and health care providers concerning the management of BP. Furthermore, 42.3% of participants never communicated with physicians neither did they know what BP physicians wanted them to have.

Regarding body weight, 30% participants were able to reduce their body weight (always) and 90.3 % never measured their body weight on a weekly basis.

3. Level of self-management behaviors: The level of self-management behaviors was divided into three levels. The score from the questionnaire ranged from 25 to 125. The researcher had used mean scores and standard deviations for dividing self-management behaviors into three levels: 1) poor level, the score was less than 65; 2) fair level, the score was from 65-94; and 3) good level, the score was more than 94. Based on the criteria, the levels of self-management behaviors of patients were: 1) 13.1% were at poor level; 2) 82.6% were at fair level; and 3) 4.2% were at good level.

Table 2 Self-management behaviors. (N=350)

	Items	Never n (%)	Almost Never n (%)	Some-Times n (%)	Almost Always n (%)	Always n (%)
1.	Engage in regular exercise at least 30 minutes /day and 3 or 4 times a week.	287(82.0)	6(1.7)	19(5.4)	10(2.9)	28(8.0)
2.	You go for a walk or jogging every day.	126(36.0)	22(6.3)	83(23.7)	44(12.6)	75(21.4)
3.	Engage in gardening or yard work daily.	124(35.4)	28(8.0)	87(24.9)	70(20.0)	41(11.7)
4.	Manage stress in a health ways by (meditation, prayer, listening to music, watching television).	250(71.4)	6(1.7)	58(16.6)	16(4.6)	20(5.7)
5.	Take a small nap in between your work to reduce stress.	286(81.7)	10(2.9)	41(11.7)	5(1.4)	8(2.3)
6.	Ask physician or pharmacist about medication side effects and how to avoid them.	275(78.6)	33(9.4)	24(6.9)	9(2.6)	9(2.6)

Table 2 Self-management behaviors. (N=350) Cont.

	Items	Never n (%)	Almost Never n (%)	Some-Times n (%)	Almost Always n (%)	Always n (%)
7.	Communicate with physicians and know what BP physicians would you like to have.	148(42.3)	22(6.3)	88(25.1)	23(6.6)	69(19.7)
8.	Seek information from physicians or health care providers regarding the management of BP.	237(67.7)	29(8.3)	58(16.6)	9(2.6)	17(4.9)
9.	Able to reduce your body weight.	68(19.4)	63(18.0)	70(20.0)	44(12.6)	105(30.0)
10.	Measure your body weight weekly.	316 (90.3)	6 (1.7)	23(6.6)	2(0.6)	3(0.9)
11.	Take antihypertensive medication as recommended.	5(1.4)	0 (0)	10(2.9)	6(1.7)	329(94.0)
12.	Read or ask about side effects when taking new prescription medication.	307(87.7)	3(0.9)	11(3.1)	10(2.9)	19(5.4)
13.	Follow-up on time for medication.	5(1.4)	14(4.0)	30(8.6)	81(23.1)	220(62.9)
14.	Comes to check BP when you have side effects like headache and giddiness to rule out other causes.	189(54.0)	31(8.9)	75(21.4)	14(4.0)	41(11.7)
15.	Taking medication without forgetting.	8(2.3)	2(0.6)	26(7.4)	58(16.6)	256(73.1)
16.	Continue taking antihypertensive without stopping suddenly.	9(2.6)	15(4.3)	21(6.0)	27(7.7)	278(79.4)
17.	Stopped drinking alcohol or drink not more than 2 drinks for men and 1 drink for women.	24(6.9)	20(5.7)	43(12.3)	22(6.3)	241(68.9)
18.	Follow low fat diet.	7(2.0)	14(4.0)	50(14.3)	44(12.6)	235(67.1)
19.	Reduced drinking butter tea 'suja' or sweet tea.	152(43.4)	22(6.3)	50(14.3)	35(10.0)	91(26.0)
20.	Reduced eating pork, chicken, mutton or beef.	13(3.7)	76(21.7)	110(31.4)	66(18.9)	85(24.3)
21.	Eat more fruits and vegetables whenever possible.	3(0.9)	29(8.3)	101(28.9)	99(28.3)	118(33.7)
22.	Reduced eating "emadatsi" and amount of rice for 3 times /day.	35(10.0)	90(25.7)	180(51.4)	27(7.7)	17(4.9)
23.	Eat low salt diet.	10(2.9)	31(8.9)	33(9.4)	40(11.4)	36(67.4)
24.	Reduced eating dry fish.	11(3.1)	25(7.1)	36(10.3)	40(11.4)	238(68.0)
25.	Ask or read food label to choose product those are lower in sodium.	190(54.3)	13(3.7)	52(14.9)	16(4.6)	79(22.6)

Discussion

This study aimed to examine the level of self-management behaviors among essential hypertensive patients of Gelephu hospital. It was found that 82.6% of the patients had fair level of self-management behaviors which is inadequate to control high blood pressure. However, self-management is effected by many factors[4] that were not mentioned earlier in this study, such as patients' belief, attitudes, perceptions, knowledge and awareness to successfully manage blood pressure. Therefore, the findings will be worth in implementing health education program for the hypertensive patients of Gelephu hospital in order to manage their high blood pressure to prevent unwanted complications. Similar study was conducted in Bangladesh and revealed the same result with moderate level of self-management.

In this study, only 11.7% engaged in gardening or yard work daily though most of the subjects were farmers and housewives. It seems that even farmers were physically inactive. It was reported that 82% of the participants were never engaged in regular exercise. This result is similar to the study in China[7]. In contrast to the study in Nepal[8] it was reported that 64% of patients engaged in regular exercise.

From the research's experience, the Bhutanese patients either lack the knowledge of importance of regular exercising or they do not get sufficient time to do regular exercise as just 8% engaged in regular exercise 'always'. Furthermore, the patients stated that by doing housework they thought they did not have to exercise. This is consistent with a study by Chaisri (1998)[9] which found that only 16.9% of essential hypertensive patients engaged in regular exercise because they thought that housework was exercise in itself.

Researcher believed that although there is an ample amount of research that provides clear evidence on the positive effects of exercise on BP, worry regarding non adherence to physical activity is growing. Nonetheless, counseling hypertensive patients on adherence to physical activity and the consequences of non-adherence should be the most important aspects of hypertensive care.

It has been reported that antihypertensive treatment targeted to reduce systolic blood pressure produced a 38% reduction in strokes[10.] In this study, 94% of the participants reported taking antihypertensive medications as prescribed, which is higher than the values reported in previous studies (26.2%) in China[11-13.]

The report of high adherence to medication in this study, one possible explanation is that patients may be likely to report desirable behavior, and the adherence to medication was probably inflated in this study. The other possible reason could be because of their belief as most of the Bhutanese hypertensive patient's belief that antihypertensive medication will damage their kidney if taken regularly and for longer period. Another potential explanation is that the treatment regimens that the patients received may not have been sufficient to maintain BP in the normal range.

However, the researcher believe that health education on the importance of adherence to medication and effective communication between patients and physicians should be focused upon for further hypertension management in this population.

Furthermore, need to impart the knowledge regarding their false belief and motivate them to be adherent to antihypertensive medication.

Surprisingly, only 6.9% did not stop drinking alcohol but the study in China[7] revealed that more than 20% never stopped drinking alcohol. A study in Nepal[8] by discovered 84% did not have a habit of drinking alcohol which exhibited the behavior of the present finding.

However, the present findings have put researcher into the frame of mind that the participants of Gelephu hospital might have overestimated the engagement of self-management behavior of not drinking alcohol. Interestingly, drinking alcohol is a custom among Bhutanese people, it is noticed that the patients engaged in alcohol consumption. Despite of seeing the patients consuming alcohol, the result shows the essential hypertensive patients executing the self-management behavior of not drinking alcohol. However, there is a reason to support the finding. The potential reason would be because of fear that they might be scolded for drinking alcohol, thus they might have reported desirable behavior.

It has been observed that moderate drinking can reduce the risk for coronary artery disease[14.] However, it is still unclear whether alcohol consumption is appropriate for those with hypertension and under medication[15.] Nonetheless, the patients must be recommended that patients with hypertension limit their alcohol intake to a maximum of two standard drinks per day for men, and one standard drink per day for small men and women[5.]

Conclusion

Although 82.6% of participants were at fair level of self-management behaviors, our Bhutanese hypertensive patients still needs improvement. Patients with essential hypertension do not have adequate self-management. Therefore, efforts should be made towards improving the level of knowledge of Bhutanese hypertensive patients through health education to enhance their self-management practices.[16]

Recommendations

The recommendations for nursing practice and further research are;

Nurses must provide education for every individual patient to enhance their self-management practices. The innovative teaching method which is easy for patients who are illiterate and farmers to understand is needed.

Qualitative research should be conducted on the essential hypertensive patients in order to explore in depth regarding their self-management behaviors of curbing high blood pressure especially on self-management behavior of consumption of alcohol, antihypertensive medication taking, and on physical activity.

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