

# Assessment of Hypertension-related Knowledge, Attitudes and Life-style Practices among Hypertensive Patients at Primary Health Care Centers in Jeddah, KSA

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## Introduction

- Hypertension is a major public health challenge worldwide.
- It is estimated 26% of the Saudi population have hypertension.
- An assessment of hypertension-related knowledge, attitudes, and lifestyle practices (KAP) among hypertensive patients in Saudi Arabia is lacking.
- Such assessment is needed for Ministry of Health officials to improve hypertension awareness campaigns and patient education efforts.

## Objectives

- We conducted a study to assess the level of hypertension-related KAP in hypertensive patients attending primary health care centers (PHCCs) in Saudi Arabia and determine whether differences in KAP are related to demographic characteristics and other factors such as disease duration.

## Methods

- Study area**  
The city of Jeddah, which includes a total of 45 PHCCs.
- Study design and sample size**
  - A cross-sectional study on hypertensive patients attending 5 of Jeddah's PHCCs during July 2015.
  - Sample size = 220 Participants with 100% response rate .
- Ethical consideration**
  - The study was approved by the Medical Research and Studies Department in Jeddah at the Directorate of Health Affairs as well as Emory University's IRB.
  - Verbal consent was obtained from study participants.
- Inclusion criteria**
  - Hypertensive patients attending the chronic disease clinic or the general internal medicine clinic.
  - All visiting hypertensive patients were eligible and there was no exclusion criteria.
- Data collection tool**  
Participants were interviewed one-on-one in Arabic using an adapted structured questionnaire, which evaluated hypertension-related knowledge (8 questions), attitudes (5 questions), and lifestyle practices (6 questions).
- Study variables**
  - Independent variables** Age, sex, education level, marital status, occupation, duration of hypertension, body mass index (BMI), family history of hypertension, smoking history, and diet type.
  - Dependent variables** KAP parameters
- Statistical Analysis**  
Descriptive statistics and Chi-square test were used.

## Results

### Demographics:

Participants were: 53% men; 67% aged  $\geq 41$  years; 81% married; 32% graduate degree holders; and 37% employed.

### Clinical and anthropometric characteristics:

47% were overweight based on their BMI values, 52% diabetic; 56% non-smokers; 75% have family history of hypertension; and 39% had hypertension for  $< 5$  years.

### Knowledge parameters:

- The youngest age group (21-30 years), men, and those with a shorter duration of hypertension were more likely to correctly identify smoking as a risk factor for hypertension ( $P < 0.001$ ).
- A higher educational level was statistically significantly associated with more knowledge about the complications of hypertension and its risk factors particularly salt intake, obesity, and smoking ( $P < 0.0001$ ).

### Attitude parameters:

- Men acknowledged the importance of regular follow up with the physician ( $P = 0.0002$ ) and regular exercise ( $P < 0.001$ ) more than women.
- Educational level was statistically significantly associated with acknowledging the importance of regular exercise ( $P = 0.01$ ).
- Shorter duration of hypertension was associated with higher acknowledgement of the importance of regular exercise ( $P < 0.001$ ).

Table 1. Knowledge parameters of hypertensive patients attending five primary health centers in Jeddah, Saudi Arabia, 2015

Knowledge parameters	N	%
Do you know whether hypertension is a disease?		
Yes	217	98.6
No	3	1.4
What are the complications of hypertension?		
Stroke	182	82.7
Renal Failure	117	53.2
Ischemic heart disease	190	86.4
What is the normal level of blood pressure (mmHg)?		
120/80	130	59.1
100/90	59	26.8
150/90	40	18.2
What are the symptoms of hypertension?		
Blurred vision	139	63.2
Dizziness	143	65
Headache	204	92.7
Is a diet rich in salt a risk factor for hypertension?		
Yes	198	90
No	22	10
Is smoking a major cause of hypertension?		
Yes	139	63.2
No	81	36.8
Is obesity associated with hypertension?		
Yes	164	74.5
No	56	25.5
Does exercise have a beneficial role in hypertension?		
Yes	195	88.6
No	25	11.4

Table 2. Attitude parameters of hypertensive patients attending five primary health centers in Jeddah, Saudi Arabia, 2015

Attitude parameters	N	%
Should we reduce salt intake to prevent hypertension?		
Yes	206	93.6
No	14	6.4
Do you think regular checking of our blood pressure is important?		
Yes	211	96
No	9	4.1
Should we follow up with our physician regularly?		
Yes	211	96
No	9	4
Do you think taking our medication is important in hypertension?		
Yes	214	97.3
No	6	2.7
Should we exercise regularly for a healthy life?		
Yes	193	87.7
No	27	12.3

## Results

### Practice parameters:

- More men reported exercising in the last month than women (42% men vs. 33% women;  $P = 0.03$ ).
- The older age group (40+ years) reported having their blood sugar level checked in the last month more than the younger age groups ( $P = 0.004$ ).
- Higher educational level was statistically significantly associated with more frequent checking of lipid profile ( $P = 0.02$ ) and exercising in the last month ( $P = 0.001$ ).
- Patients with shorter duration of hypertension were more likely to exercise in the last month than the other groups ( $P = 0.004$ ).

Table 3. Practice parameters of hypertensive patients attending five primary health centers in Jeddah, Saudi Arabia, 2015

Practice parameters	N	%
When was your blood pressure checked last?		
One week to one month ago	156	71
2 to 6 months ago	53	24.1
More than 6 months ago	11	5
When was your last visit with your physician?		
One week to one month ago	67	30.5
2 months to 6 months ago	129	58.6
More than 6 months ago	24	11
When was your last urine examination done?		
One week to one month ago	22	10
2 months to 6 months ago	118	53.6
For more than 6 months ago	80	36.4
When was your lipid profile checked last?		
One week to one month ago	22	10
2 months to 6 months ago	103	46.8
More than 6 months ago	95	43.2
When was your blood sugar level last checked?		
One week to one month ago	102	46.4
2 months to 6 months ago	93	42.3
More than 6 months ago	25	11.4
When did you exercise last?		
One week to one month ago	80	36.4
2 months to 6 months ago	66	30
More than 6 months ago	74	33.6

## Conclusion

- A high proportion of surveyed hypertensive patients had a good level of hypertension-related knowledge and attitudes but low level of hypertension-related practices.
- An urgent attention and efforts from healthcare providers are required to improve the level of hypertension-related practices.
- Similar studies with larger samples and wider coverage of regions in the Kingdom of Saudi Arabia are needed.

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