

## Knowledge, Attitude and Practice Regarding Hypertension among a Sample of Students in University of Karbala

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### Abstract

**Background:** Hypertension/ (HTN) is one of the most common health problems in developed and underdeveloped countries and affects approximately 1 billion people worldwide and it causes 7.1 million (1/3rd) of global preventable premature deaths annually. It is called the silent killer which is usually diagnosed incidentally. Although hypertension is a preventable and treatable condition but without treatment it leads to serious and life threatening complications such as heart, kidney and brain disorders which in most cases result in patient's disability. Prevention, plays significant role in controlling this disease which is achieved by increasing the knowledge and awareness of the public and changing their attitude and practice.

**Objective:** The main objective of this study was to determine the knowledge and attitude about hypertension in students of University of Karbala.

**Methodology :** Across-sectional study was conducted in Iraq ,The place where data collection and were carried out (University of Karbala) . The study consists of (400) students and the data were collected by direct interview with student by using a questionnaire form.

**Result:** - One hundred twenty six (31.5%) hypertension patients were included in the study. Total sample in this study 400 students ( 144 female and 256 male). More than 50% of students were in the age group of 18-20 years .The assessment of participants according to Knowledge of Hypertension scores was ( 32%) Good & acceptable while more than (60%) had very good attitude e scores regarding hypertension

**Conclusion:** - The overall knowledge was more than 36% very good while (32 %) of cases had accept knowledge scores, A better educational program on hypertension should be conducted to improve awareness ' attitude, practice towards Hypertension by using mass media and health education because is hypertension silent killer and may be without symptoms. Obtaining information about the level of awareness from the general public and patients is the first step in formulating a preventive program for the disease.

**Keywords:-** Hypertension , Knowledge, Attitude, University of Karbala.

### Introduction:

Hypertension (HTN) is one of the most common health problems in developed and underdeveloped countries, and can be a significant cause of mortality due to coronary artery disease, brain stroke, and renal failure. [1] Although it is a preventable and usually treatable disease but without treatment it leads to serious and life threatening complications such as heart, kidney and brain disorders [2] Hypertension is considered as the sixth leading cause of death in Iraq with a prevalence that ranges from 35.6% to 40%,[3] and a total number of 6535 deaths occurred during 2015. [4] Although it is a preventable and treatable disease, yet, without treatment it can lead to serious and life threatening complications. [5] Morbidity and mortality can be reduced by increasing the knowledge, awareness, and control of hypertension. Many patients did not have appropriate knowledge about hypertension which was evident from various studies [6] Socioeconomic differences may play an important role in the health status of populations; influence the pathogenesis of hypertension and access to preventive health services [7] In

95% of cases of hypertension unknown etiology and no cause can be indentified . Genetics clearly plays a role in the development of high blood pressure although it appears that environment and life style factors are important cofactors while in only 5% cases can a cause for hypertension be found [8] The actual level of pressure that can be considered hypertensive is difficult to define; it depends on a number of factors, including the patient's age, sex, race, and lifestyle. As a working definition, many cardiovascular treatment centers consider that a diastolic pressure of 90 mm Hg or higher or a systolic pressure of 140 mm Hg or higher represents hypertension [9] Recent reports in the United States document a decline in public awareness of the dangers of hypertension and the importance of controlling its levels within the community is important in reducing the incidence of premature cardiovascular Disease . [10]

**Patients and Methods:** - This cross-sectional study was carried out in Iraq (University of Karbala) , The Study Duration was for a period of six months starting on the 1<sup>st</sup> of November 2017 to the 29<sup>th</sup> April 2018. The study consists of ( 400 ) students and the data were collected by direct interview with those student by using a questionnaire form. the questionnaire consisting of three parts form (some demographics , knowledge and practices about Hypertension . Data was putter Computer File For storage and Analysis Descriptive statistic included The use of Frequency , relative frequency .The Chi-square Test was use to test The association between Variables with The results being Considered as statistically significant where P value was equal or less than

0.05 .SPSS Version 20 was used for data descriptive & Analysis

**Results:** -Four hundred (400) students ( 144 female and 256 male). , in the study Table one shows the demographic variable according to gender, age groups and residence and marital status . The present study show that were male 64% more than female 36% it shows different distribution in gender

On the other hand the highest in age groups (18-20 years ) more than 59% The majority of students showed that higher percentage in urban area (63, 75%) ,and rural area ( 36.25%)

Regarding the marital status of students was more than 70% single while 13.25% was married , others such as ( divorced , widow ) 16.5 %

**Table (1) distribution of study group according to gender, age group and Residence**

Variable		No.	%
Gender	Male	256	64
	Female	144	36
Age Group	18-20 years	239	59.75
	21 - 23 years	161	40.25
Residence	Rural	145	36.25
	Urban	255	63.75
Marital status	Single	281	70.25
	Married	53	13.25
	Others	66	16.5
Total		400	100 %

Regarding knowledge of participants about general information of hypertension , more than 50% of studied sample answered correctly about hypertension is infectious disease , More than half of subjects answered correctly for hypertension is genetics disease , more than 50% the correct answer about Hypertension is meaning increase blood pressure above 140 mmHg / 90 mmHg hypertension is curable and a prevented was very poor 36.5% ,while the responsible regarding Hypertension is a serious disease due to complication is accept , Majority correct answers of studied sample regarding Excessive intake of salt due to hypertension was incorrect answer ( 19% ) , and ( 9.5%) correct answers of studied sample regarding Hypertension may due to death Table (2).

**Table (2): The distribution of study group according to knowledge about Hypertension .**

Knowledge question	Knowledge (No=400)						P.V
	Correct		Unknown		Incorrect		
	No.	%	No.	%	No.	%	
Hypertension is infectious disease	204	51	0	0	196	49	0.01
Hypertension is genetics disease	254	63.5	0	0	146	36.5	0.01
Hypertension is meaning increase blood pressure above 140 mmHg / 90 mmHg	216	54	0	0	184	46	0.01
Hypertension is a serious disease due to complication	252	63	72	18	76	19	0.01
Hypertension is curable and can be prevented by drugs	146	36.5	0	0	254	63.5	0.02
Hypertension may due to death	38	9.5	254	63.5	108	27	0.01
Obligate taking drugs hypertension according to prescription	198	49.5	56	14	146	36.5	0.01
Excessive intake of salt due to hypertension	76	19	56	14	268	67	0.01
Decrease of exercise due to hypertension	184	46	88	22	128	32	0.01

The results of this study showed that the majority more than 36 % of participants had very good and while was 32% good & acceptable knowledge score toward hypertension and lower percent about knowledge of hypertension was 31.5% perfect . The association between gender and Knowledge of Hypertension was statistically significant p= 0.001. Table (3)

**Table (3): The assessment of participants according to Knowledge of Hypertension.**

Gender	Good & acceptable		Very Good		perfect	
	N0.	%	N0.	%	N0.	%
Male	56	14	128	32	70	17.5
Female	72	18	18	4.5	56	14
Total	128	32	146	36.5	126	31.5

p.V= 0.001

The Signs and symptoms approximately three quarters of studied sample answered incorrectly While answered question about Hypertension can be prevented by decrease in Improve of social economic status was

half sample correctly, and about more than half participants answers correctly for decrease in taking of salt , While the answer was poor for exercise and lower percentage about causes of hypertension (Cigarette smoking, Obesity, Renal disease, Excessive of eating) ( 14 % , 55,5% , 36% , 45%) respectively . Table (4 )

**Table (4): The distribution of study group according to attitude of Hypertension.**

Attitude question	ATTITUDE (No=400 )			
	Agree		Disagree	
	No.	%	No.	%
<b>Hypertension can be prevented by</b>				
Decrease in taking of salt	238	59.5	162	40.5
Exercise	110	27.5	290	72.5
Improve of social economic status	200	50	200	50
<b>Causes of hypertension</b>				
Cigarette smoking	56	14	344	86
Obesity	222	55.5	178	44.5
Renal disease	144	36	256	64
Excessive of eating	180	45	220	55
<b>Risk groups of hypertension</b>				
Children	254	63.5	146	36.5
Adult	128	32	272	68
Old age	252	63	148	37
All of above	202	50.5	198	49.5
<b>Signs and symptoms</b>				
Headache	108	27	292	73
Fatigue	148	37	252	63

The results of this study showed that the majority more than 60% of participants had very good attitude score toward hypertension while poor answer ( 32%) Good & acceptable about participants according to attitude of Hypertension. The association between gender and attitude of Hypertension was statistically significant  $p=0.01$ . table (5) .

**Table (5): The assessment of participants according to attitude of Hypertension .**

Gender	Good & acceptable		Very Good	
	N0.	%	N0.	%
Male	56	14	198	49.5
Female	72	18	74	18.5
Total	128	32	272	68

$p.V=0.01$

Table (6) & (7) , shows about more than 30% of students attack with hypertension and more than 70% One of family or relative attack with hypertension while 31.5% Recurrent Measurement for Blood pressure .The distribution of participants according to practices score, the responsible for Practices score was 37% Good & acceptable and 31.25 was Very Good The association between gender and Practices score of Hypertension was statistically significant  $p=0.001$ .

**Table (6): The distribution of attack students according to Practices score about hypertension .**

Practices	(No=400)	
	Yes	
	No.	%
<b>You are attack with hypertension</b>	126	31.5%
<b>One of family or relative attack with hypertension</b>	290	72.5%
<b>Recurrent Measurement for Blood pressure</b>	126	31.5%
<b>Lab examination such as lipid profile</b>	196	49%
<b>Watching medical programs</b>	254	63.5%
<b>Reading medical journals</b>	196	40%

**Table (7): The assessment of participants according to Practices of Hypertension .**

Gender	Good & acceptable		Very Good		perfect	
	N0.	%	N0.	%	N0.	%
Male	130	32.5	70	17.5	56	14
Female	18	4.5	55	13.75	71	17.75
Total	148	37	125	31.25	127	31.75

p.V= 0.001

### Discussion

Global analysis showed that the number of people with uncontrolled hypertension (>140/90 mm of Hg) increased from 600 million in 1980 to nearly 1 billion in 2008 and this number is expected to rise to 1.56 billion by 2025, which means 29% of the world adult population will have hypertension [11]. Hypertension is a healthy problem especially in the developing countries which are in a state of epidemiological transition from communicable to chronic non communicable diseases. Obtaining information from the patients about the level of awareness is the first step in formulating a preventive program for the disease. surveys are effective in providing a baseline data for evaluating intervention programs. [12]. knowledge about hypertension and benefits of lifestyle modifications seems to be the key to successful control of disease [13]. Hypertension patients (126 patients) in this study sample were diagnosed previously as hypertensive patients and which is depended by the Ministry of Health or by private clinic to distribute the prescribed drugs for those patients. Communicable Disease Center affirms that high blood pressure for adult is defined as a systolic pressure of 140 mmHg or higher, or a diastolic pressure of 90 mmHg or higher [14]. Students in University of Karbala as a part of the community and the proportion of their KAP about hypertension may be will lead to positive reflects on the community (at least for their family ) therefore conducted those study. Also Lifestyle are mainly associated with enhancing of chronic diseases and mortality rates, and a strong relationship has been defined between health literacy and knowledge of the patients about their chronic diseases [15]. However, compare our results with others is difficult. Total sample in this study was four hundred students include one hundred twenty six hypertension patients in the study more than (31%), Table one shows the demographic variable according to (age groups ,gender, marital status and residence) . The present study show that 64% male and 36% female , On the other hand the highest in age groups (18-20 years ) were more than 59% while, and more than 40 % in age groups (21-23years ) . The current study showed that higher percentage in urban area more than 63 % , and rural area 36.25%.

Regarding the knowledge information about hypertension The correct answer about Hypertension is genetics disease was more than ( 63%) similar finding by other reported study in Nepal by Shakti Shrestha et.al.,2016 was more than (56%) correct answer about high BP hereditary [16]. Hypertension is meaning increase blood pressure above 140 mmHg / 90 mmHg was 54 % , similar finding by other reported study in Northern Sri Lanka by S. Pirasath 2017 was (72.3%) [17]. Also study show Excessive intake of salt due to hypertension was (19%) is different from other reported study in Gandhinager by pragnesh parmar 2014 was (82.4%) the diet rich in salt cause hypertension [18]. The Number of correct answer ( 36.5% ) was Hypertension can be preventable is different from other report in northern Ethiopia by Teklay Aredehey Gebrihet 2017 the number of Knows that hypertension is preventable was (92.1%) [19]. According to risk factor of hypertension in study ( cigarette smoking –Obesity –renal disease – excessive of eating- Decrease in taking of salt - Believe whether exercise reduce BP) was ( 14% , 55.5% , 36% , 45% , 59.5% , 27.5 % ) respectively while was other report in Jimma University Specialized Hospital, Ethiopia by Shibiru Tesema 2016 the correct answer about question (Do you think adding salt affects BP - Do you think smoking affect BP- Believe whether exercise reduce BP) was (94.6% , 56.9% , 67.7%) respectively [20]. The Percentages of correct answers to questions on general hypertension knowledge on hypertension symptoms and complications, while (27 % ) had Headache and ( 37 % ) well Fatigue This is similar to other reported study in India by Manasa Bollampallyet.al.,2016 more than ( 32%) know the symptoms of hypertension [ 21]. The association was found to be statistically significant only between gender and the knowledge score (P. value =0.01) However, if compare our results according to overall assessment Knowledge, Attitude and practice the current study show The assessment of participants according to Knowledge of Hypertension was Good & acceptable ( 32%) and Very Good (36.5%) and perfect ( 31.5% ) The association between gender and Knowledge of Hypertension was statistically significant p= 0.001. while the assessment of participants according to attitude of Hypertension was (32%) Good & acceptable and ( 68%) Very Good The association between gender and attitude of Hypertension was statistically significant p= 0.01. The assessment of participants according to Practices of Hypertension was ( 37%) Good & acceptable & (31.25%) Very Good & (31.75%) perfect. according to others reported in Eastern Shoa part of Ethiopia by Dejene Daniel\*, Rathore Kamal 2016 was 72.27% have good knowledge, 68.32% have good attitude and 61.39% have good practice. [22].while others reported in ( Baghdad, Iraq) by Raghdaa Sadeq, &Riyadh K Lafta 2017 was knowledge poor ( 5%) and ( 34.9%) fair and (60.1%) good while attitude ( 0.2%) poor and ( 17.9%) fair and

( 81.9%) good while practice was ( 2.2%) poor and ( 73.3%) fair and ( 24.5%) good [23].

### Conclusions

The prevalence of hypertension has an increasing trend globally about more than ( 31%) hypertension patients was include in cross sectional study ( high percentage) . Often problem of about knowledge, attitude and practice of patient regarding their treatment and disease The overall scores were good and accepted regarding knowledge, attitude and practice was (31%) , A better educational program on hypertension should be conducted to improve awareness , attitude and practice towards hypertension by using mass media and health education in all Ministries. Obtaining information about the prevalence, risk factors of hypertension is the first step in formulating a preventive program for the disease. Also there is increasing need to investigate KAP among hypertension patients to help in future development of programs and techniques for effective health education

### Recommendations

- Recurrent Measurement for Blood pressure for early detect because hypertension is silent killer and may be without symptoms
- Recurrent Lab examination for six months at least such as lipid profile may be causes for hypertension
- Research regarding the traditional prevention and treatment and control of hypertension can be conducted
- Mass media for health education against hypertension and to increase the public awareness

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