



Assessment knowledge and life-style practices of patients with hypertension among their disease in rural area of Kirkuk city

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ABSTRACT

Background: hypertension also known as increase of blood pressure is consider a main factor for heart and vascular disease around world . More than 60 % around world suffering from hypertension and lead to dead more than nine million patients per year.

Aim of the study:- In order to assess patients knowledge and life-style practices for hypertensive patients in rural area of Kirkuk city , find out the relationship between patients knowledge and some socio-demographic characteristic (age and gender).

Methodology A descriptive study of a quantitative design was conducted at Alhwija General Hospital in Alhawija district for hypertension patients in Kirkuk city from 3rd July 2013 to the 20th of March 2014. A non-probability (purposive) sample of (200) definitely diagnosed hypertension patients selected from adult patients who were attended to Alhwija General Hospital . For the purpose of data collection, a questionnaire format was constructed which contains (57) Demographic data include (6) items , medical data include (6) items knowledge of the Patients include (36) items and life-style practices for hypertensive patients include (9) items. Statistical analysis was used of 3- likert scale option was used in the rating scale as: (3) for yes , (2) for uncertain ,and (1) for no. Content validity was determined by presenting the questionnaire to a panel of (10) experts. The data were collected through the interviewing . They were analyzed through the application of descriptive statistical analysis (frequency and percentage) and inferential statistical data analysis (chi-square) , T. test and ANOVAs .

Results :-The findings of the study indicated that No (62%) of the patients were in age group between (45_64)years , No(74%) were females, No(73%) married ,(73%) were house wife, (55%) illiterate, (53%) had middle monthly income, also the study show most

of the sample were not cigarette smokers that represent (86%),and family history for Hypertension and represent (57.5%)

Conclusions:- The study concluded 70% of the patients have inadequate knowledge related to disease, and 65% of them have inadequate practice regarding to the hypertension control . Also the study concluded that there is a highly significant relationship between hypertension patient's age and their knowledge.

Recommendation :-Based on the results , the study recommended Educational programs should be designed to increase people knowledge , awareness about their life style .Booklet should be prepared and presented to the patients to advise them to leave high amount salt intake, encourage patients about exercise which is considered one of the contributing factors for hypertension and construct a specialized modern centers for dealing hypertensive patients

Keyword: Assessment , Knowledge , Life style practice , hypertension patients , rural area.

تقييم معارف وممارسات نمط الحياة لمرضى ضغط الدم حول مرضهم في المناطق

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الملخص

خلفية البحث :- ارتفاع ضغط الدم وتسمى أيضاً بضغط الدم المرتفع، هو أحد عوامل الخطر الرئيسية التي تسبب أمراض القلب والأوعية الدموية. إذ يعاني أكثر من 60 % في جميع بلدان العالم من ارتفاع ضغط الدم، مما يؤدي إلى الإصابة بأمراض تُودي بحياة 9 مليون فرد سنوياً في الوقت الراهن.

أهداف الدراسة :- تهدف الدراسة إلى تقييم معارف و ممارسات مرضى ارتفاع ضغط الدم المتعلقة بتغيير نمط حياتهم للمصابين في المناطق الريفية لمدينة كركوك ، إيجاد العلاقة بين معارف المرضى وبعض الخصائص الديموغرافية (العمر، الجنس ، المستوى الثقافي، السكن).

منهجية البحث :- أجريت دراسة وصفية في مستشفى الحويجة العام في قضاء الحويجة لمدينة كركوك العام للفترة من 3 تموز 2013 ولغاية 20 من آذار 2014 ولتحقيق أهداف الدراسة اختيرت عينة غرضيه مكونة من (200) مريضا مشخصين نهائيا بارتفاع ضغط الدم ممن راجعوا مستشفى الحويجة العام .ولغرض جمع المعلومات صممت استمارة استبيانيه مكونة من (57) فقرة وتشمل الخصائص الديموغرافية (6) فقرة ؛والمعلومات الطبية تشمل(6) فقرة ومعارف المرضى تشمل (36) فقرة وممارسات نمط الحياة لمرضى ضغط الدم وتشمل (9) فقرة وبطريقة ألمقابلة الشخصية مع عينة البحث جمعت المعلومات . واستخدم مقياس يتألف من ثلاث مستويات للإجابة : الرقم (3) نعم، والرقم (2) غير متأكد ، والرقم (1) يعني كلا . وتم تحديد مصداقية المحتوى من خلال عرض الاستبيان على (10) خبراء وباستخدام التحليل الوصفي (التوزيع التكراري ،النسبة المئوية) والتحليل الاستنتاجي (مربع كاي) والاختيار الثاني والانوفا .

النتائج:- من خلال التحليل البيانات بينت الدراسة أن غالبية المرضى أعمارهم بين (45_64) ويشكلون نسبة (62%) و (74%) كانوا نساء و(73%) كانوا متزوجات وريات بيوت ونسبتهم و (55%) كانوا لا يقرئون و لا يكتبون و (53%) لديهم دخل متوسط وأظهرت النتائج أيضا أن غالبية المرضى غير مدخنين ويشكلون نسبة (88%) بينما (57.5%) لديهم تاريخ عائلي للمرض .

الاستنتاجات : استنتجت الدراسة أن غالبية المرضى 70 % كانت لديهم معلومات غير كافية حول مرضهم ، وان غالبية المرضى كانت 65 % لديهم ممارسات غير كافية حول علاج ارتفاع ضغط الدم. وكما أستنتجت الدراسة أن هناك علاقة قوية بين عمر المرضى المصابين بارتفاع ضغط الدم ومعارفهم اتجاه المرض .

التوصيات :- معتمدة على نتائج الدراسة أوصت الدراسة بإنشاء برامج تثقيفيه لزيادة معلومات وممارسات المرضى حول المرض .نشر كتيبات ،منشورات ،ومجلات حول مرض ضغط الدم ، نصح المرضى بتقليل اخذ الملح ، تشجيع المرضى حول ممارسة التمارين الرياضية التي تعتبر من الأمور المهمة في منع حدوث ضغط الدم وإنشاء مراكز تخصصية لعلاج مرضى ضغط الدم.

الكلمات الدالة : تقييم ، المعارف ، ممارسات نمط الحياة ، ارتفاع ضغط الدم ، المناطق الريفية .



1.INTRODUCTION

Hypertension is called (the silent killer) because it often has no signs , symptoms and is not detect until a serious complication develops. In the past , it was numbered that 50% of those with hypertension do not know they have it , but public education is improving the determined rates for this condition more recent figures estimate that the percentage of people who do not know they have hypertension has fallen to 27% .Complications of hypertension , including damage to the heart , blood vessels , kidneys , brain , and eyes , increase after age 50% years . men , especially African Americans , suffer serious complications more often than women . cardiac disease is the leading cause of death in hypertensive people . improved management of hypertension has significantly reduced the death rate from stroke in women age 50 and older [1] .

Hypertension and diabetes mellitus are most common and potentially handicapping chronic diseases, affecting more than 16 million and 50 million persons, respectively, in the United States. Persons with diabetes are at increased risk for a number of serious complications, including retinopathy, renal disease, and heart disease. Persons with hypertension are at increased risk for a number of serious complications ,including stroke and congestive heart failure [2] .

Puska et al. (2003) reported that more than 600 million people diagnosis with hypertension worldwide. The incidence of hypertension reported for Saudi Arabia is 25% ,for Iran 20.7% ,for Taiwan 24% ,for Canada 22% ,for China, 11.26% . National Center for Health Statistics of United States (2001) reported that, in the United States of America 64% of men aged > 75 years can be classified as hypertensive[3].

Knowledge and practice about Hypertension is very important to control and preventable of hypertension , typify a chronic disease of blood pressure elevation that is often masked , especially in the early years of onset , by lack of warning signs or symptoms , hypertensive crisis is an acute episode or exacerbation , occurring infrequently in a small percentage of hypertensive patients and characterized by the pivotal effect the particular episode and is treatment may have on the patients long term outcome . in most cases , the numerical or absolute value of the arterial BP is less important than its impact on the individuals underlying risk of target organ damage , specifically cerebrovascular , coronary , and renal disease[4] .

2.SPECIFIC OBJECTIVES OF THE STUDY

- 1- To assess knowledge and life style practice of patients with hypertension toward their disease in rural area of Kirkuk city .
- 2- To find out the relationship between knowledge and some socio _ demographic characteristic (age , gender, residence and education level).

3.METHODOLOGY

To achieve the objectives of the study quantitative design (descriptive study) was conducted on hypertension patients from 3rd July 2013 up to the 20th of March 2014 .To assess hypertension patients knowledge and life style practice at Alhawija general hospital in Kirkuk city.

Setting of study: the study was conducted at Alhawija general hospital in Kirkuk city, which are receiving large number of hypertension patients from rural area at Alhawija district .

The Sample: A non-probability (purposive) sample of (200) definitely diagnosed hypertension adult patients over 20 years old , male and female selected from adult patients who were attended to the Alhawija general hospital . Through extensive review of relevant literature, a questionnaire was format constructed for the purpose of the study with interview technique. Overall items included in the questionnaire were (57) items, demographic data include (6) items , medical data include (6) items knowledge of the Patients include (36) items and life-style practices for hypertension patients include (9) items. 3- likert scale option was used in the rating scale as: (3) for Yes , (2) for Uncertain ,and (1) for No.

Validity of study content validity was determined by presenting the questionnaire to a panel of (10) experts in different specialties three physicians experts in medicine , three experts in adult health nursing, three experts in pediatric nursing ,one expert in psychiatric nursing .Those experts were asked to review the questionnaire for content clarity, relevancy , and adequacy .Their responses indicated that minor changes should be performed on few items. All modifications were made relative to their recommendations .

Data collection the data collection process was performed from the period 3rd July 2013 up to the 19th of august 2013 .

Data analysis The collected data were analyzed through the application of descriptive statistical analysis (frequency and percentage) and inferential statistical data analysis (chi-square) , T. test and ANOVAs .

4. RESULTS

Table (4-1): Demographic characteristics of the study sample (No=200)

Variables	No.	%
Age		
20-44 years	19	9.5
45-64 years	124	62
64 years and more	57	28.5
Total	200	100%
Gender		
Male	52	26
Female	148	74
Total	200	100%
Residence		
Urban	166	83
Rural	34	17
Total	200	100%
Marital status		
Single	2	1
Married	146	73
Divorced	1	5
Widow	51	25.5
Total	200	100%

Table (4-1) demonstrates the socio-demographic characteristics of the whole study sample. The results shows the high percent in age most patients at age between (45- 64 years) and constitute 124 (62 %) .Also the results shows the hypertension is common in females and constituted of 148 (74 %) . With regard to residence 166 (83%) were living in urban areas, most of the patients were married and constituted 146 (73%) of the sample .

Table (4-2): Mean of Scores for General knowledge items with frequency , percentage , severity and Chi-square .

No	General knowledge	Yes		Un certain		No		MS	P value
		F	%	F	%	F	%		
1	Hypertension define as systolic pressure 140mm hg and diastolic pressure 90 mm hg	129	64.5	38	19	33	16.5	2.48	S
2	Hypertension define as silent killer	39	19.5	49	24.5	112	56.0	1.63	NS
3	HT causes early death if not treated	154	77.0	21	10.5	25	12.5	2.64	HS
4	Bp consider normal if systolic pressure less than 140mm hg and diastolic pressure less than 80 mm hg	22	11.0	36	18.0	143	71.0	1.40	NS
5	HT for along period may be cause destroy the vascular in the kidneys , brain and limbs	30	15.0	28	14.0	142	71.0	1.44	NS
6	Most of people suffering from HT for many years without any symptoms	111	55.5	54	27.0	35	17.5	2.38	S
7	Increase the risk for HT with developing years	17	8.5	16	8.0	167	83.5	1.25	NS
8	HT more common in male in the beginning of half age but in women after menopause	52	26.0	44	22.0	104	52.0	1.74	S
9	HT is a chronic disease	185	92.5	8.0	4.0	7.0	3.5	2.89	HS

Obs.X² =793.938

DF =16

Crit. X² =26.296

Table (4-2) show that the mean of score was highly significant in items (3,9) and significant in items (1,6,8) and no significant in items (2,4,5,7)

Table (4 - 3): Mean of Scores for signs and symptom items with frequency, percentage , severity and Chi-square

No	Signs and symptoms of HT	Yes		Uncertain		No		MS	Severity
		F	%	F	%	F	%		
1	Dizziness	4	2.0	22	11.0	174	87.0	1.15	NS
2	Shortness of breathing	2	1.0	44	22.0	154	77.0	1.24	NS
3	Palpitation	159	79.5	31	15.5	10	5.0	2.74	HS
4	Nausea	94	47.5	95	47.5	11	5.5	2.41	S
5	Chest pain	3	1.5	58	29.0	139	69.5	1.32	NS
6	Spontaneous Epistaxia	55	27.5	134	67.0	11	5.5	2.22	S
7	Poly uria	131	65.5	61	30.5	8	4.0	2.61	HS
8	Conjectival hemorrhage	5	2.5	59	29.5	136	68.0	1.34	NS
9	Flashed face	111	55.5	80	40.0	9	4.5	2.55	HS
10	Headache	183	91.5	16	8.0	1	0.5	2.91	HS
11	No signs and symptoms	74	37.0	106	53.0	20	10.0	2.27	HS

Obs.X² =1643.655

DF=20

Crit. X² = 31.410

This table indicates that the mean of score was highly significant in items (3,7,9,10,11), and significant in items (4,6) and no significant in items (1,2 , 5,8)

Table (4-4): One –way analysis of variance for the difference between General knowledge , Signs and symptoms , Risk factors ,Complications and Treatment of hypertensive patients and their age.

Categories	S.O.V	S S	M S	F.Obs
General knowledge	Between Groups	20.450	20.450	3.33 S
	Within Groups	202.236	6.128	
	Total	222.686		
Signs and symptoms	Between Groups	40.959	20.479	3.28 S
	Within Groups	1227.121	6.229	
	Total	1268.080		
Risk factors	Between Groups	20.179	10.089	3.04 S
	Within Groups	653.696	3.318	
	Total	673.875		
Complications	Between Groups	30.101	15.050	3.413 S
	Within Groups	868.694	4.409	
	Total	898.795		
Treatment	Between Groups	30.344	15.172	2.864 S
	Within Groups	1043.531	5.297	
	Total	1073.875		

F critical = 2.99

Df= 199

Table (4-4) This table shows that there were significant differences between General knowledge , Signs and symptoms , Risk factors ,Complications and Treatment of hypertensive patients and their age at P value ≤ 0.05 .

Table (4-5): T-test for comparison for the difference between hypertensive patients in General knowledge ,Signs and symptoms , Risk factors ,Complications and Treatment of hypertension,

Categories	Sex	No.	X	S.D	T.obs	P value
General knowledge	Male	52	11.7143	2.05866	0.730	NS
	Female	148	12.3929	2.68520		
Signs and symptoms	Male	52	16.0385	2.39248	2.340	S
	Female	148	15.1216	2.53387		
Risk factors	Male	52	9.5192	1.80946	0.204	NS
	Female	148	9.4595	1.85670		
Complications	Male	52	9.3077	2.28841	1.552	NS
	Female	148	8.7500	2.05329		
Treatment	Male	52	15.1154	2.61709	1.301	NS
	Female	148	14.5878	2.20367		

T critical = 1.96 Df=198

Table (4-5) this table show that there were no significant differences between General knowledge , Risk factors ,Complications and Treatment of hypertension client, regarding to their gender at P value ≤ 0.05 except for signs and symptoms .

Table (4-6): Mean of Scores for General knowledge items in hypertensive patients with frequency , percentage , severity and Chi-square .

No	General practice	Yes		Un certain		No		MS	Severity
		F	%	F	%	F	%		
1	Take drugs and attend clinic regularly?	53	26.5	76	38.0	71	35.5	1.91	MS
2	Take much table salt?	32	16.0	57	28.5	111	55.5	1.60	LS
3	Take drugs when I have symptoms?	29	14.5	76	38.0	95	47.5	1.67	LS
4	Use condiments in cooking?	31	15.5	73	36.5	96	48.0	1.67	LS
5	Take plenty of fruits?	30	15.0	79	39.5	91	45.5	1.69	LS
6	Smoke or use tobacco very well?	29	14.5	79	39.5	92	46.0	1.68	LS
7	Take plenty of vegetables?	34	17.0	77	38.5	89	44.5	1.72	MS
8	Take plenty of red meat ?	34	17.0	80	40.0	86	43.0	1.74	MS

Obs.X² = 27.685

DF = 14

Crit. X² = 23.68

Table (4-6) show that the mean of score was moderate significant in items (1,7,8) and low significant in items (2,3,4,5,6)

5.DISCUSSION

Results of the study in Table (1) show that high percentage of Patients were (45-64) years and constituted 142 (62 %) of the total sample. The explanation of this result may be this age group are more common because this category from (45-64) years is more available in our community. The present study is agreement with the study conducted by Andrson et al. (2009) about Effect of Age on Hypertension and show that increased age is lead to a significant increase in the prevalence of hypertension and especially of systolic hypertension after age 60 years[5] .The result of Table (1) show that Hypertension is more common in female and constitute 148 (74%) from total sample. The finding results were supported by

Smith and others , (2005) who mentioned that up to about age 55, women have a lower incidence of hypertension and other cardiovascular diseases than men do. But women's blood pressures, especially the systolic readings, rise more sharply with age. Indeed, after age 55, women are at greater risk for high blood pressure. This pattern may be partly explained by hormonal differences between the sexes. Estrogen tends to protect women against cardiovascular diseases, including hypertension, but as the production of estrogen drops with menopause, women lose its beneficial effects and their blood pressures climb[6]. Also the result revealed as in Table (4-1) high percentage of patients was married and constitute 146 (73%) because our communities focus on marriage, so we find that most of the elderly clients are married. It appears from the table the majority of the patients was house wife and consist (73%), this is because the women more than in our country and the sample of the study was female. With regard to the educational level It is obvious from the table that most of the patients were un able to read and write and constitute about (55%) from total patients, the reason of this marked proportion is that lack of social knowledge. Regarding level of education Antikainen, et al., (2006) mentioned that knowledge is necessary to prevent and control hypertension, a major public health problem exists, but control rates are dismal in every part of the world. The lack of baseline data in many countries and lack of national data in most countries make it difficult to develop any reasonable prevention projects and from a public health point of view, the prevention and control of hypertension are cost-effective intervention[7]. According to monthly income most of the patients were had middle monthly income and constitute (53%) . George , et al., (2008) mentioned that there is increasing emphasis in the major general and specialized scientific journals on the burden of cardiovascular disease in terms of mortality and morbidity of hypertension as a leading risk factor in low income countries[8]. Table (4-2) This table indicates that the mean of score was highly significant in items (3,9), and moderate significant in items (1,6,8) and low significant in items (2,4,5,7) .Bloomberg and Frieden (2010)the explanation of item 3 about the hypertension causes the Early death because consider a silent killer. High Blood Pressure (Hypertension) Can kill the patients if left untreated, high blood pressure can cause ,Heart disease, Stroke, Heart attacks and heart failure, Problems with blood vessels and circulation, Kidney disease, Eye problems (reduced vision, blindness)[9]. The result of item (9) about the hypertension consider as a chronic diseases was highly significant .

Folsom et al (2007) mentioned that the Hypertension is one of the most common chronic conditions worldwide, affecting an estimated 1 billion people. It is a major contributor to heart disease, heart failure, stroke, kidney disease, and other conditions, and, according to the World Health Organization, contributes to more deaths worldwide than any other risk factor[10].The item (1) of the Table (2) about definition of hypertension were moderate significant . The international society and world health organization define hypertension as a sustained blood pressure of more than 140/80 mmhg .In the same table about the item 6 some people suffering from HT for many years without any symptoms the result shows moderate significant because the HT some times without signs and symptoms . Blood pressure often rises with age. High blood pressure however can occur at any age and mostly it does so without causing any symptoms [11].The result item (8) shows moderate significant .because the women are less likely than men to develop hypertension at an early age ,the survey found the that the HT by the age (70 years) the prevalence of HT in women 55% compared with men(50%) [12].The items (2 ,4 , 7) shows no significant because most patients were unable to read and write and don't have enough culture to understand HT. Table (4-3) signs and symptoms of hypertension this table indicates that the mean of score was highly significant in items (3,7,9,10,11), and moderate significant in items (4,6) and low significant in items (1,2 , 5,8) .Friedman (2002) stated that there are several reasons why the "hypertension headache" misperception persists: hypertension may be an epiphenomenon of acute pain, headache is associated with hypertensive encephalopathy as a manifestation of increased intracranial pressure, and headache is a side effect of some antihypertensive treatments[13].

Kent R, et al., (2009) mentioned that in some patients with palpitations, no heart disease or abnormal heart rhythms can be found. Reasons for their palpitations are unknown. In others, palpitations result from abnormal heart rhythms (arrhythmias)[14].Table (4) risk factors for HT this table indicates that the mean of score was highly significant in items (1,4,7,8), and moderate significant in items (5) and low significant in items (2,3,6). Framingham Heart Study investigators recently reported the lifetime risk of hypertension to be approximately 90 percent for men and women who were non hypertensive at 55 or 65 years and survived to age 80–85. 16 Even after adjusting for competing mortality, the remaining lifetime risks of hypertension were 86–90 percent in women and 81–83 percent in men. The impressive increase of BP to hypertensive levels with age is also illustrated by data indicating that the 4-year rates of progression to hypertension are 50 percent for those 65 years and older with

blood pressure in the 130–139/85–89 mmHg range and 26 percent for those with blood pressure between 120–129/80–84 mmHg range[14]. About 24% of people in the United States have high blood pressure and in 90-95% of the cases the cause is unknown. However, we do know that certain people are more likely to develop high blood pressure. Risk factors include, family history of high blood pressure , obesity or overweight , diabetes , excessive alcohol use , African-American descent and use of oral contraceptives or "the pill" in some women ,certain over-the-counter drugs (e.g. decongestants)[15]. Table (4-4) One –way analysis shows that there were significant differences between General knowledge , Signs and symptoms , Risk factors ,Complications and Treatment of hypertension patients and their age at P value ≤ 0.05 .Anderson, (2009) conducted there study about Effect of Age on Hypertension: Analysis of Over 4,800 Referred Hypertensive Patients and conclude increased age is associated with a significant increase in the prevalence of hypertension and especially of systolic hypertension after age 60 years. Increased obesity between age 30-50 years is associated with significant increases in diastolic blood pressure and this trend is also seen in African-Americans who are heavier than whites. Increased age is associated with an increased prevalence of secondary forms of hypertension including atherosclerotic , vascular hypertension, renal insufficiency and primary hypothyroidism[5]. Table (4-5) T-test this table shows that there were no significant differences between General knowledge , Risk factors ,Complications and Treatment of hypertension client, regarding to their gender at P value ≤ 0.05 except for signs and symptoms .Shine et al. (2012) conducted study to identify the gender differences in the association between self-rated health and hypertension in a Korean adult population 32.5% of the participants were found to have hypertension. Women were more likely than men to rate their SRH as poor (p < 0.001), and the older age groups rated their SRH more negatively in both men and women (p < 0.001). While the multivariate-adjusted odds ratio (OR, 95% CI) of participants rating their SRH as very poor for hypertension in men was OR 1.70 (1.13-2.58), that in women was OR 2.83 (1.80-4.44). Interaction between SRH and gender was significant (p < 0.001). And concluded self-rated health and hypertension (SRH) was independently associated with hypertension in a Korean adult population. This association was modified by gender[16]. Table (4-6) life style practice of patients with hypertension this table indicates that the mean of score was moderate significant in items (1,7,8) and low significant in items (2,3,4,5,6).Xin, et al (2001) to assess the effects of alcohol on blood pressure, showed a dose dependant decline in blood pressure.

They conclude that blood pressure falls 4 to 5 mm Hg in days or weeks with abstinence from alcohol[17]. Jaymee, (2009) stated that in the Framingham Heart Study, a famous study for 44 years, estimated that excess body weight (including overweight and obesity), accounted for approximately 26 percent of cases of hypertension in men and (28)percent in women, and for approximately (23) percent of cases of coronary heart disease in men and (15) percent in women. Obese individuals have an increase in fatty tissue that increases their vascular resistance and in turn increases the work the heart has to do to pump blood throughout the body[18]. Forman J, (2009) declared that healthy lifestyle could reduce hypertension risk by 80%, they looked at the link between low-risk lifestyle factors and the risk of developing hypertension in 83 882 women age (27 to 44) years in the second Nurses' Health Study who did not have hypertension, cardiovascular disease, diabetes, or cancer and who had normal reported blood pressure as defined as systolic blood pressure of <120 mm Hg and diastolic blood pressure of <80 mm Hg in 1991; they were followed for 14 years through 2005 [19].

Veronique V, (2009) explained that healthy lifestyle will help prevent cardiovascular disease and greatly enhance health, which is a compelling reminder that health is the shared responsibility of individuals and communities. This in turn implies that public-health policies and clinical care must join forces to achieve effective disease prevention[20].

6.CONCLUSIONS

- 1- Most of the sample was between (45- 64) year's old represent (62%), female represent (74%)
- 2- High percentage of patients were married and constitute (73%), Most of them were house wife and constitute(73%) .
- 3- Most of the samples were unable to read and write (55%),and had middle monthly income represent (53%).
- 4- Most of the sample were had complaint of disease more than years and represent (77%) and duration of treatment between 1-4 years and represent (47.5 %) .
- 5- Most of the sample had diabetes mellitus and represent (35%)and overweight represent (30.0%) .
- 6- Most of the sample were not cigarette smokers that represent (86%),and family history for Hypertension and represent (57.5%) .



7- The study concluded 70% of the patients have inadequate knowledge related to disease, and 65% of them have inadequate practice regarding to the hypertension control.

8- Also the study concluded that there is a highly significant relationship between hypertension patient's age and their knowledge.

7.RECOMMENDATIONS

1- Educational programs should be designed to increase people knowledge and awareness about their life style practice for control of hypertension.

2- Booklet should be prepared and presented to the patients to advise them to leave high amount salt intake, give up exercise which is considered one of the contributing factors for hypertension.

3- Specialized a modern centers for dealing with hypertensive patients.

4- Further study has to be conducted in all Kirkuk regions.

5- Secondary school curriculum should include topics concerning the caused and risk factors of the disease and its prevention.

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