Factors Affecting Compliance of Patients with Essential Hypertension toward Therapeutic Regimen

Badr Ibrahim Ahmed Abdu [(1)], **Bahia Galal Abd EL-Razi** [(2)] **& Magda Abd El-Aziz Mohammed** [(3)]

[(1)]Clinical instructor, Faculty of Nursing, Mansoura University, [(2)] Lecturer of Medical-Surgical Nursing, Faculty of Nursing, Port Said University, [(3)] Professor of Medical-Surgical Nursing, Faculty of Nursing, Ain Shams University

Abstract:

Background: Hypertension forms a major public health problem in the world. Compliance toward different therapeutic regimen is a key factor in controlling blood pressure. **Aim of study** was to assess factors affecting compliance of patients with essential hypertension toward therapeutic regimen. **Research design & setting**: A descriptive exploratory design was utilized in this study at the Outpatient Clinic at Medical Specialist Hospital, Mansoura University. **Sample:** A convenience sample of all available adults from both sex and aged 20-60 years diagnosed as essential hypertension and on antihypertensive treatment were recruited for the current study, through assessment of patients' socio-demographic characteristics, knowledge, practice, compliance through Hill Bone Scale, and factors affecting their compliance. **Results:** The findings of the present study revealed that: Most of the studied sample had unsatisfactory knowledge score about hypertension, more than three quarters of them were noncompliance toward different therapeutic regimen. The social support, economic and psychological factors affected the majority of the studied sample **Conclusion:** The study concluded that compliance with therapeutic regimen in patient with essential hypertension influenced significantly by socio-demographic characteristics, while it was not influenced by their knowledge about hypertension. **Recommendation:** The study recommended that development of educational program for patient with essential hypertension about life style modifications and different aspects of treatment regimen and how to be compliant with it.

Keywords: Essential Hypertension, Compliance, Therapeutic Regimen.

Introduction:

Hypertension (HTN) is one of the most common worldwide diseases affecting human beings because of the associated morbidity, mortality, the cost of the society and it is an important public health challenge over the past several decades. Hypertension remains a major risk and powerful predictor when poorly compliant or if left untreated. [(1)]

Hypertension is defined as the persistent elevation in several measurements at different blood pressure (BP), systolic blood pressure (SBP) greater or equal to 140 mmHg and / or diastolic blood pressure (DBP) less than 90 mmHg, on at least two subsequent occasions [(2).] Essential hypertension is that applied to about90–95% of cases, which means high BP with no an obvious underlying medical cause. It is also called primary hypertension or idiopathic. As it is the commonest, it is usually affecting people between the ages of (40-60) year. [(3)]

Hypertension is an overwhelming global challenge which ranks third as a cause of disability adjusted life-year. Hypertension causes 7.1 million premature deaths each year worldwide and accounts for 13% of all deaths globally. [(4)] Almost a quarter of the worlds' adult population has hypertension, affects approximately one billion and the prevalence is projected to rise to 1.5 billion by 2025, it is expected that approximately 1 in 3 adults aged over 20 years will have the disease. In the United States (US),

more than half of the entire population over 60 years has HTN. It affects approximately 74 million people in the US. [5]

The prevalence of HTN is high in the Middle East. In the Eastern Mediterranean Region; HTN affects 26% of the adult population in the region. Additionally, cardiovascular diseases (CVD) and stroke account for 31% of deaths [6]. In Egypt, HTN affects about 26.3% of total population [7] and in Dakahlia affects 14.7% of people. [8]

Compliance or adherence has been defined as the "active, voluntary, and collaborative involvement of the patient in a mutually acceptable course of behavior to produce a therapeutic result. This definition implies that the patient has a choice and that both patients and providers mutually establish treatment goals and the medical regimen. [9]

Noncompliance is a significant problem and a major challenge for the health care team. Practical advice is offered for nurses and other health care professionals to increase patient compliance with therapeutic regimens. [10] Compliance involves not only taking the prescribed medications but also adherence to follow-up appointments and maintaining the recommended lifestyle modifications. [11]

Factors that affect adherence are complex but may include beliefs about illness and treatment, side effects and complexity of treatment regimens, socio-demographic factors and factors related to the patient are involved. [12]

The nurse, as a member of the multidisciplinary group, has very important responsibilities in monitoring the hypertension adherence (HTA), namely: to perform nursing consultation, whose focus is centered on the management of therapeutic regimen, self-monitoring, self-management and therapeutic education. [13]

Significance of the Study:

Hypertension (HTN) is an important public-health challenge worldwide and its control is still a challenge and has been poor all over the world. Prevention, detection, treatment, and control of this condition should receive high priority.

Its prevalence has increased worldwide and is predicted to further increase. [14] Recent data from the Egyptian National Hypertension Project showed that Egypt has the highest prevalence rate of HTN in the world, in addition Egyptian patients have the highest noncompliance in developing countries and little work is done to improve their compliance**.** [15]

It has been well documented that high level of compliance decreases the risk of cardiovascular disease and other target organ complications and good compliance to antihypertensive drugs (AHD) is a key factor in controlling BP. [16] For these reasons, there is an essential need to conduct this study to assess factors affecting compliance of patients with essential hypertension toward therapeutic regimen.

Aim of the Study:

The aim of this study was to assess factors affecting compliance of patients with essential hypertension toward therapeutic regimen.

Research Questions:

- What are the factors affecting compliance of patients with essential hypertension toward therapeutic regimen?
- Is there a relationship between patients' socio-demographic characteristics and their compliance?
- Is there a relationship between patients' knowledge and their compliance?

Subjects and Methods:

Research Design:

A descriptive exploratory design was utilized in this study.

Setting of the study:

The study was conducted at the Outpatient Clinic at Medical Specialist Hospital, Mansoura University, as it is the biggest medical hospital at Mansoura city which has patients with essential hypertension.

Subjects:

A convenience sample of all available adults from sexes and aged 20-60 years diagnosed as essential hypertension and on antihypertensive treatment were recruited for the current study. Patients who were unable to communicate were excluded from the study.

Tools of Data Collection: Two tools were used for data collection:

Tool (I): Patients' Assessment Sheet:

This tool was developed by the researcher. It was written in simple Arabic Language and included three parts:

- **Part (1):** Patients' socio-demographic data**:** which were composed of (9) closed ended questions, included (age, sex, marital status, living status, educational level, residence, number of family members, occupation, and monthly income).
- **Part (2):** Patients' medical history included: present duration, patient's present, past, and family history, mode of discovery, symptoms, and history of complications.
- **Part (3):** Patients' knowledge interviewing questionnaire sheet**:** This questionnaire was developed by the researcher to assess patients' knowledge about hypertension and therapeutic regimen.

Scoring system:

Patient's assessment sheet for knowledge consists of (19) closed ended questions, it is formed of multiple choice, the answer was scored using model key answer prepared by the researcher. The score was (1) score for correct answer & (zero) for uncorrected. The total score for total knowledge was (89).The total score was calculated as follows:

- Satisfactory if the score ≥ 60 % of the maximum score.
- Unsatisfactory if the score < 60% of the maximum score.

Tool (II): Included two parts:

- **Part (1): Hill-Bone Compliance High Blood Pressure Therapy Scale:** This scale was constructed by Hill-Bone, Kimand-levine [(17)]**,** to assess patient compliance for three important behavioral domains of high blood pressure treatment: 1) reduced sodium intake, contains 3 items assessing dietary intake of salty foods. 2) Appointment keeping, contains 2 items assessing appointments for doctor visits and prescription refills and 3) Medication taking, contains 9 items assessing medication taking behavior. This scale was translated and examined by Hassan. [(18)]
- **Part (2): A structured Interviewing Questionnaire Sheet**: to assess the factors (barriers) affecting compliance of patients with essential hypertension to the following areas; medication taking, hypertensive diet, follow-up visits, smoking cessation and caffeine limitation, physical exercise, social support from family and friends, economic and psychological factors [Q1-Q18].This questionnaire was constructed and tested by the researcher after extensive literature review.

***Scoring system*:** Items are assumed to be additive and when summed, the total score ranges from 14 (minimum) to 56 (maximum).

Content validity and reliability:

Content validity was ascertained by seven jury of expertise from medical and nursing staff to review the tools for clarity, relevance, comprehensiveness, understanding, and simplicity for implementation and according to their opinion some modifications were applied.Testing reliability of the proposed tool was done using cronbach's alpha test that measures the degree of reliability for the entire form. Both techniques showed high reliability of the final version of the tool. (Alpha = 0.85).

Pilot study:

A pilot study was carried out on 10% of sample (20 patients) with essential hypertension who attended the follow up outpatient clinic to ensure clarity, objectivity, relevance, applicability, and feasibility of the tool as well as to estimate time needed. Modifications in accuracy and logic consequence of some questions were done according to the results of pilot study and excluded patients who shared in it from the main study sample.

Field work:

The actual field work started January 2013 to the end of June 2013. The data was collected during the morning shift, two days per week after explanation the purpose of the study to the patients who agreed to participate in the study. The sheets were filled by the researcher, each tool required 20 minutes to fill.

Administrative and ethical considerations:

An official written permission to conduct the study was obtained from the director of Medical Specialist Hospital, Mansoura University. In addition to verbal explanation of the nature and the aim of the study was performed to medical and nursing staff in outpatient follow-up clinic.

The aim of the study was simply explained to the patients. An oral consent was obtained from patients who agree to participate in the study prior to data collection. They were assured that anonymity and confidentiality would be guaranteed and that he/she has the right to withdraw from the study at any time. Ethics, values, culture and beliefs were respected.

Statistical design:

All data collected were organized, entered and analyzed using appropriate statistical significance test. The data were collected, and coded. The data were analyzed by using SPSS, version 15, which was applied to frequency tables, statistical significance and associations were assessed using chi-square and correlation to detect the relations between the variables (P value). Number and percentage, mean, range and standard deviation (SD) were also used.

Results:

Table (1): Shows the characteristics of the studied sample that 75.0% of them were in age group 40 - <60 years with mean age 47.59 ±8.87 years. 55.0% of the studied subjects were females, 78.5 % of them were married. It was also observed that 97.0% of the studied sample were living with their families with 65.5% had (4-5) members lived with them. In addition, 67.5% of the studied subjects had not enough monthly income for treatment regimen.

Table (2): Demonstrates the medical health history of the studied sample that 20.0% of them had a previous admission to hospital during last year with high blood pressure.

62.5% of the studied sample had a positive first degree family history of hypertension, 43.0% of them had hypertension since one year to less than five years, while only 6.0% of them had hypertension since less than one year. The table also shows that 73.5% of the studied subjects had discovered hypertension with symptoms, while 14.5% & 12.0% of them discovered hypertension during medical checkup and incidentally respectively. In addition, 82.5% of the studied sample was using one type of medication for treating hypertension, while 17.5% of them were using two types.

Figures (1): Reveals that 52.5% of the studied subjects were suffering from hypertensive complications.

Figure (2): Shows that 20.0% of the studied subjects had CVD and DM, while only 1.5% of them had cerebrovascular disease.

Figure (3): Indicates patients' compliance toward different therapeutic regimen, that 79.5% of the studied subjects were non-compliant toward different therapeutic regimen.

Figure (4): Shows that the social support and economic factors affected all of the studied sample (100.0%), psychological factors affected 80.5%, diet factors affected 65.0%, and medication factors affected 56.5%, while smoking affected only 16.5% on patients' compliance.

Figure (5): Shows that 87.5% of the studied subjects had unsatisfactory knowledge scores about hypertension with mean ± SD = 41.25 ± 12.71.

Table (3): Shows relations between patients' knowledge about hypertension and their compliance, there were no statistically significant relations between patients' knowledge and their compliance to different areas of treatment regimen.

Table (4): Shows relation between duration of hypertension and their compliance, that there was a highly statistically significant relation between duration of hypertension and total compliance scores toward different therapeutic regimen. The highest compliance scores were noticed at 5-<10 years of duration.

Table (5): shows relations between Socio-demographic characteristics of the studied sample and their compliance. There were statistically significant relations between age groups of the studied subjects and their compliance toward different therapeutic regimen (medication, diet and follow up).

There were statistically significant relations between marital status and patients' compliance toward diet and follow up with p. value (0.005, 0.041, respectively), while there was no a statistically significant relation as regard compliance to medication. The highest noncompliance scores were for married patients.

A statistically significant relation was found between monthly income and compliance to follow up (p. < 0.05), while monthly income had no an effect on patients' compliance to medication and diet.

There were statistically significant relations between patients' occupation and their compliance toward medication and diet, while had no an effect on patients' compliance toward follow-up. The highest compliance scores were noticed for patients were working at governmental sectors.

Discussion:

Hypertension is a serious public health problem due to its high prevalence and good control of the disease has always considered being essential for reducing its morbidity and mortality. [19]

Compliance with treatment is a very important issue in the successful control of hypertension and prevention

of complications. Identifying factors determining low compliance of hypertensive patients to treatment are therefore of vital importance in applying therapeutic strategy and in obtaining satisfactory results. [20]

The result of the present study revealed that more than three quarters of the studied sample were in the same age group (40 - <60 years), this may be due to that this period of age is the productive period, which is associated with more stress. This finding is in accordance with George, D'silva and D'souza and Eze et al., [21, 22], who found that the majority of their studied sample were in age group 40 - <60 years. While contradicts with other studies findindings which reported that most of their studied sample fell in the category 35-44 years and / or above 60 years. These differences may be due to different setting and different criteria of sampling. [23, 24]

As for their family situation and living status, the result of the present study showed that the majority of the studied sample was living with their families. This findings might be due to the majority of the studied sample were married and living with their families. This findings is in accordance with Santos and Moreira [25], who found that the majority of their patients lived with someone else, whether a partner, child, or other relatives.

Regarding the monthly income, the results of the present study revealed that, more than two thirds of the studied sample had not enough monthly income. This may be due to a large number of studied subjects were females who are housewives and unemployed and monthly incomes are in relation with patients' occupation. This result is supported by Okoro and Ngong [9] and Edo [24], who reported that more than three quarters of their studied samples did not state their monthly income. Moreover, other studies reported that the majority of their studied patients had highest poverty rate. [6, 26] But this finding is in contrast with Hareri and Abebe and Saleem et al., [27, 28], who found that about half of their studied sample had enough monthly income.

As regard to family history of hypertension, the present study revealed that the majority of hypertensive patients had positive family history of hypertension; most of them were first degree relatives. The present findings reflect the fact of hereditary factors play a major role in the expression of hypertension and history of a close blood relative (e.g., parents, siblings) with hypertension is associated with an increased risk for developing hypertension [29]. This finding is in agreement with Abed and Abu-Haddaf and Iyalomhe and Iyalomhe [6, 30], who reported that more than half of their studied sample had positive family history of hypertension.

Regarding the way of discovering hypertension, the result of the present study revealed that about three quarters of the studied sample had discovered hypertension by symptoms. This might be due to the severity of the condition or the patients might have the disease for a long period before discovering the problem. The present finding is in contrast with Heymann et al., and Hashmi et al., [31, 32], who found that most of the studied subjects had discovered the disease during frequent checkup examination, while the minority of them discovered hypertension by symptoms.

As regard complications of the disease, the results of the present study revealed that more than half of the studied sample was suffering from hypertensive complications; one fifth of them had CVD and DM, while the minority of them had cerebrovascular disease. These current results reflect poor patients' compliance to different

treatment regimens. These findings are in accordance with other studies who found that about two fifths of their patients had CVD and DM., while the minority of them had stroke. [25, 26, 33] Furthermore, the majority of another sample had complications such as stroke, heart failure, myocardial infarction, renal failure, left ventricular hypertrophy and angina. [34]

The present findings are disagree with Edo [24], who found that the majority of the studied sample did not have any health complaints. Also, Alwey [35] reported that the majority of his sample had stroke and Ambaw et al., [4] who reported that near half of the respondents had no any of the co morbidities like heart disease, diabetes mellitus, renal diseases and others. These differences results prove that the complications are positively correlated with the occurrence of hypertension.

Regarding total Compliance scores toward different therapeutic regimen, the result of the present study demonstrated that the majority of the studied sample was noncompliant to different therapeutic regimen. These might be related to patients' knowledge and asymptomatic disease which give patients feeling with good health due to noncompliance. These findings are in agreement with Alwey and Malacco et al., [35, 36] who found that most of their study subjects were non-adherent to their treatments. However; these findings are inconsistence with Erkoc et al., and Okeahialam [37, 38], who found that more than two thirds of their studied subjects were adherent to their treatment. These differences could be due to measurement of adherence based on different criteria in the studies along with variation in the subset of population which served as the study sample.

In relation to factors affecting patients' compliance; the results of the present study revealed that the social support and economic factors affected all of the studied sample, followed by psychological factors, These may be because most of the studied sample were from rural areas and patient's family lacked of knowledge about the importance of social support to the patient, also most of sample were not working which had an effect on their income and social support by significant others or health care providers help to reinforce compliance behavior and patients receiving social support from their families and friends have better compliance. Psychological and emotional factors may also play an important role in determining compliance with treatment regimen; the psychological factor has a negative impact on the patient compliance. This is because patients experiencing these conditions such as stress, fear and anxiety are often unable to properly manage their conditions.

These findings are in accordance with Alsolami, Hou and Correa-Velez and Krzesinski and Krzesinski [39, 40], who found that the same factors affected compliance of their studied subjects to different treatment regimen.

Regarding total knowledge scores of the studied sample. The findings of the present study revealed that the majority of the studied sample had unsatisfactory knowledge scores about hypertension including the nature of disease, risk factors, complications and treatment regimen. The possible explanation; more than half of studied subjects were illiterates. This result is in agreement with Iyalomhe and Iyalomhe [30], who found that the majority of their studied subjects had unsatisfactory knowledge.

But the current result is in contrast with Saleem et al., [28], who found that more than two thirds of his studied sample had average knowledge about hypertension Also, Anthony et al. and Al-Mehza et al., [41, 42] reported that

most of their patients had sufficient knowledge. These differences may be related to the level of education of the patients and/or the service presented from the health team of their medical centers.

Concerning relation between knowledge of the studied sample and their compliance with different therapeutic regimen, the present study reported that there was no significant statistical relation between patient's knowledge and their compliance to different areas of treatment regimen. This might be due to not only knowledge affects patients' compliance, but also attitudes and behaviors. This finding is in agreement with Hassan and Saman et al., [18, 43], who reported that there was no a significant relation between knowledge and compliance.

The current result is in contrary with Soliman, Hashmi et al., and Erkoc et al.[15, 32, 37] who reported that there is a statistically significant positive relation between patients' knowledge score and their compliance, as the higher the knowledge score, the higher compliance score.

Concerning relation between duration of hypertension and compliance toward therapeutic regimen, the present study indicated that there was a highly statistically significant relation between duration of hypertension and compliance toward different therapeutic regimen. This finding is in agreement with Alwey and Al bana and Mohamed [35, 44], who reported that there was a significant association between the duration of disease and the compliance of patients with essential hypertension, as those with duration of hypertension between 5-10 year and more than 10 years showed the highest compliance rate. But this finding is in contrary with Hadi and Rostami-Gooran [45], who found that there was no significant relation among patients with different durations of hypertension and their compliance.

Regarding relations between socio-demographic characteristics of the studied sample and patients' compliance with treatment regimen, the current study showed that there was a statistically significant relation between patients' age and their compliance to treatment regimen. These may be explained by the fact that older patients tend to be more scared of disease; consequently, they have fear of death than younger ones, so they comply with the medical regimen imposed by the disease. The current study finding is in accordance with other studies which reported that age of patients was a significantly correlated with compliance rate. [46, 47, 48] However this finding contradicted with Al – Banna and Mohmed [44], who reported that there was no relation between age and compliance rate. Moreover, Bosworth et al., [49], found that the younger patients are more compliant with treated regimen than older ones. While disagree with Hassan and Mweene et al., [18, 26] who reported that compliance was not significantly affected by age of the patients.

As regard to relation between gender and compliance to treatment regimen, the current study showed that there was no a statistically significant relation between gender and compliance to treatment regimen. This might be due to most of males had the burdens of family responsibilities and most of time out of home than females who were mainly housewives and more liable to devote their time to their families and taking care of themselves. This finding is in accordance with Salem and Hassan and Heckler et al., [50, 51], who reported that there was no a statistically significant relation between gender and compliance with

medication and diet of hypertensive patients. But these results are in consistent with Ambaw et al., and Alsolami, Hou and Correa-Velez [4,.39] who reported that there was a significant association between gender and adherence level with the treatment regimen.

Education had no significant effect on patient's compliance, as most of patients in the present study were non-educated while the least were highly educated. The same observation was reported by Kwane and Lioyd [52]. But in contrast with Al – Banna and Mohmed and Banta et al., [44, 48], who reported that there was a significant association between the educational level and patients' compliance, the lower level of education is associated with higher non-compliance with health habits.

In the present study revealed that there was no a statistically significant relation between monthly income and compliance to medication and diet of patient with hypertension. While a significant relation was observed between monthly income and compliance with follow up. This result is supported by Salem and Hassan [50], and Hashmi et al. [32], who reported that there was no a significant relation between compliance and monthly income. But this result is in contrast with Ingram and Morrow et al., [46, 53], who found that there was a significant relation between compliance and monthly income, as the limited income will probably affect compliance particularly if the drug is expensive or if the patients are receiving multiple drugs.

Conclusion:

Based on the results of the present study, the following can be concluded:
There were many factors that affected compliance of patient with essential hypertension toward therapeutic regimen such as patient's related factors, factors-related to diet, factors-related to treatment regimen, factors related to follow-up, social support, economic factors and psychological factors. Also it can be concluded from this study that compliance with therapeutic management in patients with essential hypertension influenced significantly by their socio-demographic characteristics, and also affected by social support. But it was not influenced by patients' knowledge about hypertension.

Recommendations:

Based on the most important findings of the study, the following recommendations are suggested:

- Development of an educational program for patients about lifestyle modification as decreasing fat intake and salt in their diet, performing exercise, smoking cessation and stress reduction.
- At the patient level, continuous health teaching using T.V programs, video tapes and brochures to enhance compliance with therapeutic regimen should be used.
- Patients' care in the outpatients clinics for hypertension should be improved in order to offer more comfort and benefits to the patients which may improve their compliance with periodical follow-up even if they feel better.
- Designing a training program for outpatient nurses about hypertension and its management and proper ways to provide health education and appropriate counseling for hypertensive patients in order to improve compliance.

Table (1): Distribution of Patients with Essential Hypertension According to their Socio-demographic Characteristics (n=200)

Item	No.	%
Age groups (in years)		
20 -	37	18.5
40 -	150	75.0
≥ 60	13	6.5
Mean ± SD = 47.59 ±8.87		
Gender		
Male	90	45.0
Female	110	55.0
Marital status		
Single	5	2.5
Married	157	78.5
Divorced	5	2.5
Widower	33	16.5
Living status		
Alone	5	2.5
With family	194	97.0
With others	1	0.5
Number of family members		
1 - 3	39	19.5
4 - 5	131	65.5
≥ 6	30	15.0
Monthly Income		
Enough for treatment regimen	65	32.5
Not enough for treatment regimen	135	67.5

Table (2): Distribution of Patients with Essential Hypertension According to their Medical Health History (n=200)

Item	No.	%
Hospitalization during last year with high blood pressure:		
Yes	40	20.0
No	160	80.0
***Family history of hypertension:**		
Yes	159	79.5
No	41	20.5
Degree of relativity		
1st degree	125	62.5
2nd degree	34	17.0
Duration of hypertension		
< 1	12	6.0
1-	86	43.0
5 -	68	34.0
≥ 10	34	17.0
Way of discovering hypertension:		
With symptoms	147	73.5
With medical check up	29	14.5
Incidentally	24	12.0
Types of medications used		
One type	165	82.5
Two types	35	17.5

***NB:** * answers were not mutually exclusive*

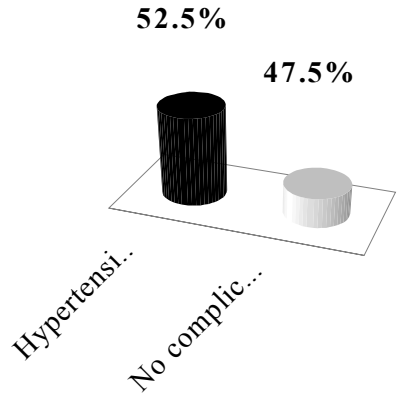

Figure (1): Percentage of Patients' Complications of Essential Hypertension (n=200)

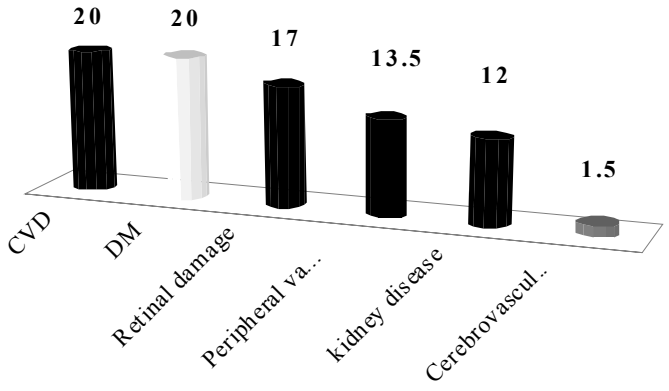

Figure (2): Distribution of Patients with Essential Hypertension According to their Complications Found (n=200)

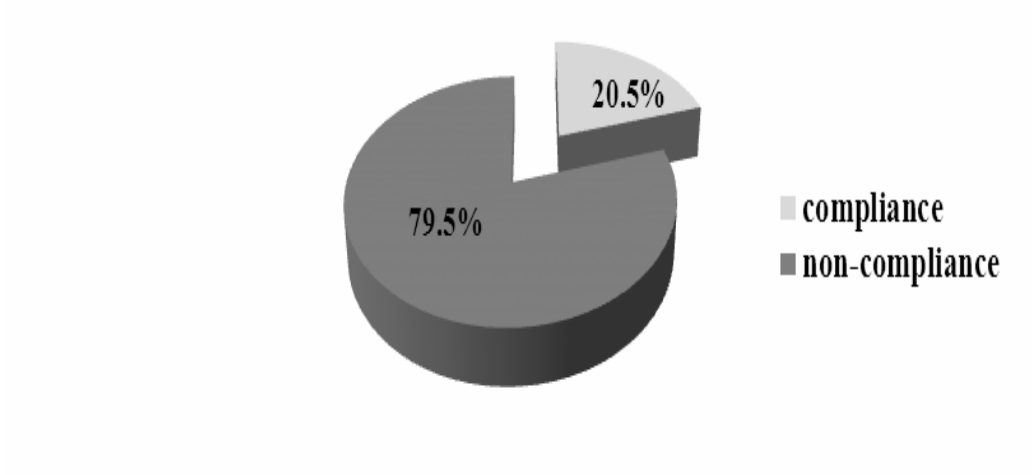

Figure (3): Distribution of Patients with Essential Hypertension According to their Total Compliance Scores toward Different Therapeutic Regimen (n = 200)

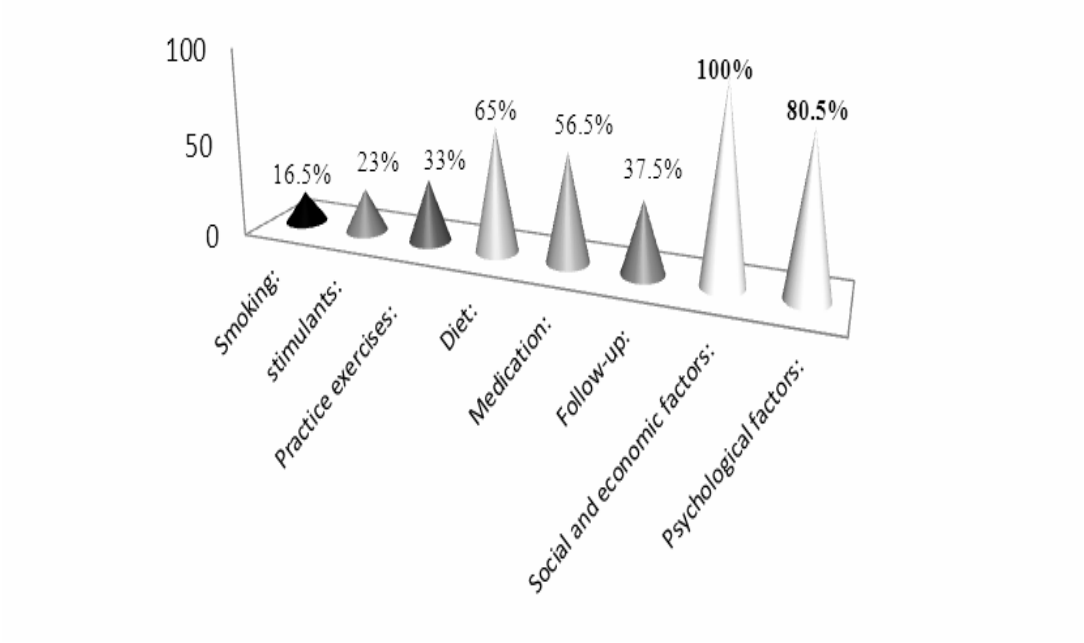

Figure (4): Distribution of Patients with Essential Hypertension According to Factors (Barriers) Affecting Compliance toward Therapeutic Regimen (n=200)

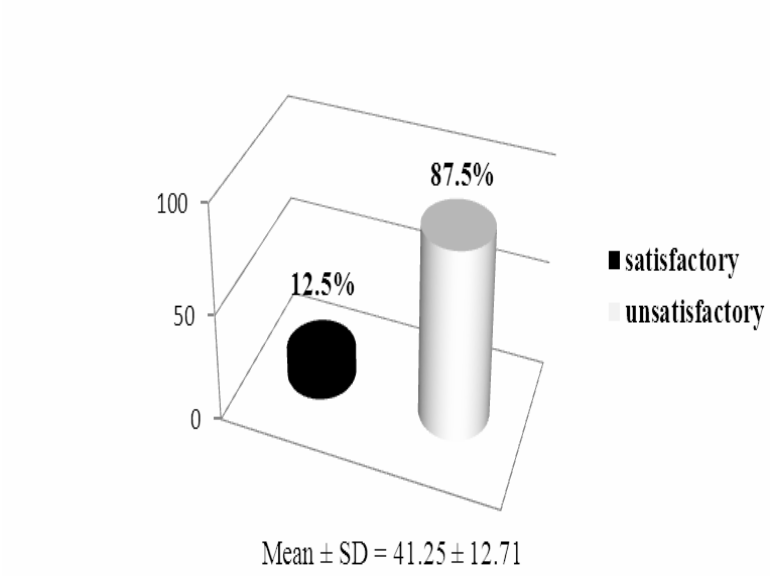

Figure (5): Distribution of Patients with Essential Hypertension According to their Total Knowledge Scores about Hypertension (n=200):

Table (3): Relations between Knowledge of Patient with Essential Hypertension and Compliance with Therapeutic Regimen (n=200):

Knowledge of Patient	Satisfied		Unsatisfied		X2	P value
Compliance items	**No.**	**%**	**No.**	**%**		
Diet Compliance:						
Compliance	6	24.0	36	20.6	0.155	0.694
Non-compliance	19	76.0	139	79.4		
Follow-up Compliance:					0.054	0.816
Compliance	8	32.0	52	29.7		
Non-compliance	17	68.0	123	70.3		
Medication Compliance:					0.580	0.446
Compliance	9	36.0	50	28.6		
Non-compliance	16	64.0	125	71.4		

Table (4): Relation between Duration of Hypertension and Compliance toward Therapeutic Regimen (n = 200)

Compliance	Compliant		Non-compliant		X2	P value
Duration of Hypertension	**No.**	**%**	**No.**	**%**		
<1	1	2.4	11	6.9		
1-	7	17.1	79	49.7	20.381	**0.000
5 -	19	46.3	49	30.8		
≥ 10	14	34.1	20	12.6		

** *Highly Significant ≤ 0.001*

Table (5): Relations between Socio-demographic Characteristics of the Studied Sample and Compliance with Treatment Regimen (n=200):

Socio-demographic characteristics	Compliance with treatment regimen											
	Medication				Diet				Follow-up			
	compliant %	Non compliant %	X2	P- value	compliant %	Non compliant %	X2	P- value	compliant %	Non compliant %	X2	P- value
Age groups (in years)												
20 -	6.8	23.4	7.776	*0.020	7.1	21.5	6.347	*0.042	8.3	22.9	6.912	*0.032
40 -	84.7	70.9			81.0	73.4			81.7	72.1		
≥ 60	8.5	5.7			11.9	5.1			10.0	5.0		
Gender												
Male	52.5	41.8	1.924	0.165	47.6	44.3	0.147	0.701	48.3	43.6	0.385	0.535
Female	47.5	58.2			52.4	55.7			51.7	56.4		
Marital status												
Single	1.7	2.8			0.0	3.2			1.7	2.9		
Married	72.9	80.9	3.421	0.331	66.7	81.6	12.73	*0.005	71.7	81.4	8.260	*0.041
Divorced	1.7	2.8			0.0	3.2			0.0	3.6		
Widowed	23.7	13.5			33.3	12.0			26.7	12.1		
Residence												
Urban	30.5	29.1	0.04	0.840	26.2	30.4	0.280	0.597	31.7	28.6	0.193	0.660
Rural	69.5	70.9			73.8	69.6			68.3	71.4		
Monthly Income	35.4	64.6	3.053	0.217	21.5	78.5	2.609	0.271	35.4	64.6	5.904	*0.052
Enough	26.7	73.3			20.7	79.3			27.4	72.6		
Not enough												
Level of education												
Illiterate	37.3	32.6			50.0	29.7			38.3	32.1		
Read & write	16.9	20.6	5.612	0.230	19.0	19.6	8.965	0.062	18.3	20.0	3.172	0.529
Secondary	13.6	24.1			7.1	24.7			15.0	23.6		
University	30.5	19.1			21.4	22.8			26.7	20.7		
Master	1.7	3.5			2.4	3.2			1.7	3.6		
Occupation:												
Governmental	50.8	28.4			42.9	32.9			45.0	30.7		
Private sector	10.2	27.7	12.26	*0.007	7.1	26.6	7.586	*0.055	11.7	27.1	7.385	0.061
Housewife	39.0	43.3			50.0	39.9			43.3	41.4		
Retired	0.0	0.7			0.0	0.6			0.0	0.7		

Significant ≤ 0.05* * Highly Significant ≤ 0.001*

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العوامل المؤثرة على إلتزام مرضى ضغط الدم الشريانى المرتفع الأولى تجاه النظام العلاجي

بدر إبراهيم أحمد عبده [١]، بهية جلال عبدالرازق [٢]، ماجدة عبد العزيز محمد [٣]
[١] أخصائية تمريض-كلية التمريض-جامعة المنصورة، [٢] مدرس التمريض الباطنى والجراحى- كلية التمريض-جامعة بورسعيد، [٣] أستاذ التمريض الباطنى والجراحى- كلية التمريض-جامعة عين شمس

مقـدمة:

يعد مرض ارتفاع ضغط الدم من الأمراض الأكثر شيوعا فى العالم و من أهم المشاكل الصحية التى لابد من علاجها، بل هوعامل خطر رئيسي ومؤشرا قويا لإعتلال القلب والأوعية الدموية والوفيات الناتجة عن إصابة الأعضاء الملحقة بالأوعية الدموية في القلب والمخ والكلى والعينين، وله تأثيرا ملحوظ على كلا من المرضى والأقارب والمجتمع.

وعلاج ارتفاع ضغط الدم لا يتحقق إلا عن طريق إلتزام المريض بالنظام العلاجي، ولا يتمثل هذا الإلتزام فقط فى أخذ الأدوية الموصوفة و لكن أيضا التكيف مع التغيرات العلاجية لنمط الحياة الموصى بها من خلال تقليل الوزن، وزيادة النشاط البدني، والحد من تناول الأغذية التى تحتوى على الملح بكثرة، و ذلك لمنع الإصابة بمضاعفات ارتفاع ضغط الدم.

الهـدف من الدراسة :

تهدف هذه الدراسة إلى تقييم العوامل المؤثرة على إلتزام مرضى ضغط الدم الشريانى المرتفع الأولى بالنظام العلاجى.

طرق و أدوات الدراسة:

نوع الـدراسة:

تم استخدام دراسة وصفية استطلاعية فى هذا البحث.

مكان البحث:

تم إجراء هذه الدراسة بالعيادات الخارجية لمتابعة مرضى ضغط الدم المرتفع بمستشفى الباطنة التخصصى، جامعة المنصورة.

عينة البحث:

تضمنت عينة البحث المرضى البالغين من٢٠-٦٠ سنة من الجنسين، والذين يعانون من ارتفاع ضغط الدم الأولى لمدة ستة أشهر، مع استبعاد المرضى الذين لديهم عدم القدرة على التواصل.

أدوات جمع البيانات:

تم جمع البيانات باستخدام أداتين رئيسيتين:

الأداة الأولى : استمارة استبيان مقابلة شخصية تحتوى على ثلاثة أجزاء:

- **الجزء الأول:** تشمل الصفات الديموغرافية والإجتماعية للمريض من حيث النوع ، السن، الوظيفة، الحالة الاجتماعية، درجة التعليم ومستوى الدخل.
- **الجزء الثاني:** تشتمل على البيانات الطبية والتاريخ المرضى للمريض.
- **الجزء الثالث:** تحتوى على إستمارة استبيان مقابلة شخصية لتقييم معلومات المريض عن الضغط و النظام العلاجى.

الأداة الثانية : تحتوى على جزئيين:

- **الجزء الأول:** مقياس هيل-بون ٢٠٠٠ لقياس الإلتزام بعلاج ضغط الدم المرتفع: لقد تم إنشاء هذا المقياس بواسطة هيل-بون سنة ٢٠٠٠ لكى يقيم سلوكيات المريض تجاه أهم ثلاثة أوجه سلوكية خاصة بعلاج الضغط وهى تقليل أملاح الصوديوم بالوجبة ، المحافظة على مواعيد المتابعة ، تناول العلاج بانتظام.
- **الجزء الثاني:** إستمارة استبيان مقابلة شخصية صممت من قبل الباحث لتقييم العوامل (المعوقات) المؤثرة على إلتزام مرضى ضغط الدم المرتفع بالنظام العلاجى.

الدراسة الميدانية :

تم إجراء الدراسة الميدانية على ١٠٪ من المرضى قيد الدراسة لاختبار مدى انطباق ووضوح وكفاءة أدوات البحث.

النتائج:

وقد أسفرت نتائج البحث عن الاتى:

- أكثر من نصف المرضى في هذه الدراسة (٥٥,٠٪) من الإناث اللاتى تتراوح أعمارهن بين (٤٧,٥٩ ± ٨,٨٧)، ٧٨,٥٪ كانوا متزوجون.
- وفيما يتعلق بالدعم المالي وجد أن ٦٧,٥٪ من المرضى لديهم دخل غير كافى.
- أن ٨٧,٥٪ من المرضى ليس لديهم معلومات عن المرض.

- معظم العينة المدروسة (٧٩,٥٪) غير ملتزمون بالنظام العلاجي.
- كل المرضى لديهم عامل أو أكثر من العوامل التي تؤثر على التزامهم بالخطة العلاجية (١٠٠,٠٪) لديهم عوامل إجتماعية و إقتصادية ، أما العامل النفسي فيعوق التزام ٨٠,٥٪ من المرضى تجاه الالتزام، ٦٥,٠٪ لديهم عائق جسماني تجاه الالتزام بالنظام الغذائي لضغط الدم المرتفع، ٥٦,٥٪ لديهم عائق جسماني تجاه الالتزام بأخذ العلاج لضغط الدم المرتفع.
- وجود علاقة ذات دلائل إحصائية بين كلا من سن المريض والإلتزام العلاجي.
- وجود علاقة بين سن المريض و وظيفته و الإلتزام بالنظام الغذائي.
- وجود علاقة ذات دلائل إحصائية بين سن المريض والحالة الإجتماعية ومستوى الدخل للمريض ومدى إلتزامه بالمتابعة فى العيادة الخارجية .
- عدم وجود دلائل و علاقات إحصائية عن كلا من الإلتزام بالنظام الغذائي ،الإلتزام العلاجي والمتابعة فى العيادة الخارجية و معلومات المريض عن المرض.
- وجود علاقة ذات دلائل إحصائية بين كلا من مدة المرض والإلتزام بالنظام العلاجي.

الخلاصة:

أوضحت الدراسة الحالية أن هناك العديد من العوامل التي تؤثر على إلتزام مريض ضغط الدم المرتفع نحو النظام العلاجى ومنها العوامل الخاصة بالمريض، العوامل المتصلة بالنظام الغذائى، العوامل المتصلة بأخذ العلاج، والعوامل المتعلقة بالمتابعة فى العيادة الخارجية و أخيرا العوامل الإجتماعية والإقتصادية والنفسية . كما أوضحت نتائج الدراسة أن الإلتزام بالنظام العلاجي لمرضى ضغط الدم المرتفع يتأثر بالخصائص الإنسانية والدعم الإجتماعي وليس بمدى معرفة المريض بالمرض.

التوصيات:

فى ضوء النتائج الرئيسية للدراسة الحالية تم اقتراح التوصيات التالية:

- ضرورة عمل برنامج تعليمي للمرضى المصابين بضغط الدم المرتفع عن أهمية الإلتزام بالنظام الدوائي والطرق المختلفة الأخرى المستخدمة لعلاج ضغط الدم المرتفع.
- التأكيد على أهمية المتابعة الدورية في المستشفيات والعيادات الخارجية عن طريق الفريق الطبي وتبسيط النظام العلاجي للمريض بربطه بالأحداث اليومية مثل تناول الدواء بعد الأكل.
- التعليم المستمر للمرضى من خلال استخدام البرامج التليفزيونية، شاشات العرض، الملصقات وهذا مما يحث على الإلتزام بالنظام العلاجي.
- ضرورة عمل برنامج تعليمي للفريق الطبي عن أهمية الإلتزام بالنظام العلاجي وكيفية تدريب المريض على هذا الإلتزام.