

**EFFECT OF PATIENTS COUNSELLING ON MEDICATION ADHERENCE AND
QUALITY OF LIFE IN HYPERTENSIVE PATIENTS -A REVIEW**

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ABSTRACT

Hypertension is a common non communicable chronic disease that requires monitoring regularly with a time interval to prevent complications leading to cardiovascular disease. Hypertension is a silent killer disorder and is a main public health problem. There is rapid increase in the prevalence of hypertension in rural and urban area as well as economically developed and developing countries. **Objective:** To develop the levels of treatment satisfaction and medication adherence through patient counselling. To review and evaluate the effect of patient counselling in hypertensive patient on medication adherence and quality of life. **Method:** The latest review literature and research articles on medication adherence and life style changes in hypertensive patients has been done by screening different publications such as PUB-Med, Elsevier, Scopus, Clarivate, Springer and Wiley. **Result:** To enhance the better knowledge of hypertension which increases medication adherence to hypertension treatment and ultimately improve general health related quality of life. **Conclusion:** After reviewing the different articles and research papers on the basis of patient counselling to deliver hypertensive patients that influences positive effect in improving the patient's understanding about medication, disease, life style changes to achieve the maximum therapeutic effect, improve the quality of life of hypertensive patients and ultimately to help control high blood pressure.

INTRODUCTION

Hypertension is a non-communicable chronic disorder. So, a closed monitoring is required regularly with a time interval to control the high blood pressure.^[1] At least 45% of deaths are caused due to a heart disease and 51% of deaths due to a stroke.^[2] According to WHO, Hypertension is defined as force exerted by the circulatory system against the wall of the artery. Systolic blood pressure is greater than 140 mmHg and diastolic blood pressure is greater than 90 mmHg. The content of blood pressure is of two types- systolic blood pressure and diastolic blood pressure. Systolic blood pressure is generated in the blood vessels when the heart is contracting and diastolic blood pressure is generated in the blood vessels when the heart is relaxing.^[3] Hypertension is one of the most modifiable risk factors of cardiovascular diseases and end stages of renal diseases and stroke.^[4] Hypertension is a main public health problem and the rapid increase in prevalence of hypertension in rural and urban areas as well as economically developed and developing countries. Globally, hypertension affects 1.13 billion people worldwide and in economically lower countries, 9 million deaths occur annually from hypertension. Whereas, some reports show that 7 million people die from hypertension each year as severe complication and due to the lack of proper counselling and treatment. Prevalence of hypertension is more in Sub Saharan

Africa (SSA). The adults were affected more by hypertension. Approximately 80 million cases till the year 2000 and up to 150 million by 2025 is estimated.^[5,8,18] The main key of uncontrolled blood pressure (BP) is medication non adherence, lack of knowledge about medication, not getting proper counselling and life style changes among hypertensive patients which leads to life-threatening complications, increase in economic burden, hospitalization and premature mortality.^[6] In such situations uncontrolled high blood pressure will increase the health care cost, morbidity, mortality and other organ damage.^[7] The treatment, prevention and diagnosis of high blood pressure is a silent killer because at the time of increase of blood pressure, symptoms may not appear.^[9] Medication adherence and life style modification is more important to achieve the desired therapeutic goal and it is more effective to control hypertension.^[10] In the treatment of hypertension, primary focus is on self-care, which includes medication adherence and lifestyle changes, intake of healthy dietary habit, exercise, weight loss (in obese patients), limited or no consumption of alcohol.^[11] If a patient has high blood pressure, then the patient should avoid foods which contain high fat and salt but more priority should be given to foods which contain high amount of calcium, magnesium and potassium which help to reduce the high blood pressure.^[12] Dietary Approach Stops Hypertension

(DASH) gives priority to an increased intake of carbohydrate rich fruits, vegetables, low fat dairy products, moderate intake of fish, wholegrain and decrease and intake of fat cholesterol red meat, sweets^[31] low sodium and high potassium, magnesium, and calcium.^[15] Omega 3 poly saturated fatty acid intake of high dose because may be lower the blood pressure in hypertensive patients.^[32] According to DASH standards, the diet intake of sodium should be 2300 mg/day. Low sodium regimes are only required for the patients who are more than 50 years old and African patients with hypertension. DASH therapy plays a main role in controlling high blood pressure and also in preventing heart diseases, stroke, diabetes, weight reduction and finally promote good health.^[15]

Some data suggest the prevalence a hypertension decreases according to the income of the country. Decrease in prevalence of hypertension with increase in income was observed due to increase in facilities and preventive management strategies.

WHO identifies the main risk factors of hypertension which are broadly categorized as:

1. Behavior
2. Social demography
3. Metabolism
4. Cardiovascular diseases

Behavior includes tobacco, unhealthy diet, physical inactivity, heavy alcohol, psychological stress, depression, anxiety, etc.

Social demographic risk factors include the higher age, gender, lack of education and the family income, Metabolic risk factors include obesity, diabetics, and elevated lipid.^[19]

Outline of hypertension

Hypertension is a serious medical condition which is decided highest attributed risk deaths from cardiovascular disease^[24] the epidemiological study showed evidence the risk of cardiovascular disease related to blood pressure.^[25] Elevated blood pressure is caused by known and unknown cause.^[26] There are two types of elevated blood pressure which are given below.

Primary hypertension and secondary hypertension.

Primary hypertension id also called as essential hypertension which is caused by unknown result from unhealthy life style and aging.

Patient counselling based on Hypertension

Hypertension is known for the severe complications resulting in end stage organ damages. If hypertension is uncontrolled, it can lead to negative effects in quality of life.

The treatment of hypertension requires both non pharmacological and pharmacological treatment.

Non pharmacological treatment

Non pharmacological treatment is also called as life style modification. Good life style improved their promote their healthy health status. Life style change is more help to out patients.^[27,28] Life style suggested the essential in order to minimized hypertension risk and along with hypertensive drugs.^[29] Life style modification is one of the most effective way of reduce the elevated blood pressure. Even prevent the hypertension due to delay life style modification.^[30]

According to Non pharmacological management of hypertension, pharmacist can counsel the patients regarding life style, weight loss, salt intake, regular exercise, smoking, alcohol, and increased intake of dietary fiber.^[20]

Pharmacological treatment

According to Pharmacological management of hypertension, more priority is given to drugs called Anti-hypertensives. Many of these drugs have serious side effects. For instance, ACE inhibitors cause cough and b-blockers cause bradycardia.^[20]

Measure adherence

Medication adherence was detected by the help of validated eight types of Morisky medication adherence scale. It contains 8 question every question contain one scoring point. This questionnaire with Yes/ No response format and is based on the scoring points. The medication adherence was rated as following.^[20]

Very good medication adherence – 8, good medication adherence – 6 to 8 and poor medication adherence <6. Hence patients who had a poor rate of medication adherence mention or include as non adherence.

Measure the quality of life

Quality of life was detected by using of validated SF-36 questionnaire. It contains 11 questions in yes/ no format based on the scoring point. The lifestyle was rated as following:

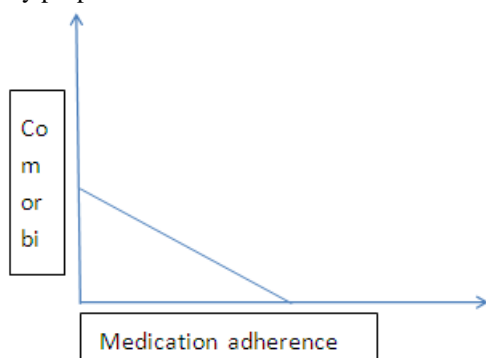
High quality of life- 10-11, medium quality of life- 8-10, moderate quality of life-6-8. Hence patients who had less than moderate quality of life mention or include as poor quality of life.^[21]

Increase in the score of quality of life indicates improvement of quality of life. This reduces the increase in the number of cases due to better facilities. The increase in the number of drugs had a negative impact in medication adherence.^[22,23]

Many studies evaluate medication adherence rate among hypertensive patients and socio demographic factors affect medication adherence such as age, gender,

comorbidity, patient's knowledge regarding disease and the number of medication.

The study reported the presence of comorbidity is inversely proportional to medication adherence.



Objective

Patient counselling is important to achieve suitable therapeutic goal and effective control of high blood pressure because patient counselling provides idea, knowledge, dietary plan in the form of verbal or sign language and written form regarding the medication and its use, side effects, adverse effects, storage, diet and life style changes.

Explain this study of review and effectiveness of medication adherence and life style changes in hypertensive patients.^[13-14]

Method

A total number of 40 from 60 articles were taken for the study and after screening, 20 articles were taken for the study. The latest observational and comparative studies are done by review of literature and research article on the basis of counselling and medication adherence by screening different publications like Pub-Med, Elsevier, Scopus, Clarivate, Ugcare, etc. Effect of patient counselling on medication adherence and life style changes related report is available data. Web based researched has been done by screening of different preceding review articles, research articles and text books and studied.

RESULT

The result of this study indicates that hypertensive patients are more influenced with female patients as compared to male and prevalence of hypertension is more in 42-65 years of age. Most of the cases show that the increase in blood pressure correlates with increase the age, low economy, low literacy rate, lack of understanding about on treatment regimen processes like dose, frequency of drug, route of administration or self-regulation of the treatment regimen and finally that tends to be higher appear in women as compared to men. So patients focus on good level of education regarding medicine regimes and disease. The important role of patient counselling to patients gets the therapeutic result by providing patient counselling services. Responsibility

of patient counselling to improve or maintaining the patient quality of life and understanding on treatment regimens ultimately achieve desired therapeutic goal. This directly reduces the admitted time in hospital and improves or reduces the economic burden of the patient. This result shows that by proper counselling by the pharmacist, there was more improvement in the outcome. Pharmacist plays a vital role in the management of chronic diseases through the counselling by providing information related to possible complications.^[2,20]

(To enhance the better knowledge of hypertension which increase medication adherence to hypertension treatment and finally improve general health related quality of life)

CONCLUSION

The economic burden of hypertension is increasing in developing countries and this appears in both rural and urban areas. So proper education and awareness should be developed according to the need of the society.^[15] Patient counselling suggests that increase in the physical activity, reduce stress and salt intake will ultimately lead to blood pressure control.^[17] This study showed the important role of pharmacists in providing counselling to hypertensive patients to deliver a positive effect in improving the patient's understanding about medication, disease and life style changes to ultimately achieve the maximum therapeutic effect and improve the quality of life of hypertensive patients.

This result indicates patient counselling could improve the therapeutic efficacy, medication adherence and quality of life of hypertensive patients. The role of pharmacists in the management of diseases like hypertension will help to reduce the economic burden due to health issues and drug related problems.^[2]

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