

## Evaluating the Performance of Patients with Hypertension Referred to Hospital

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High blood pressure (hypertension) is a major manageable risk factor for cardiovascular diseases. Hypertension is one of the major problems in developing and underdeveloped countries. This common and asymptomatic disease is easily controlled and treated. This study aimed to evaluate the performance of patients with hypertension referred in Tarom city. 95 men and women referred to the emergency department of Shohadaye- Tarom Hospital, affiliated with Zanjan University of Medical Sciences, were randomly and purposefully selected in this descriptive study, consisting of 28 females and 67 males. In this study, a researcher-made questionnaire was used consisting of two parts: 1) Demographic features and lifestyle (disease status, dietary habits, sleep and rest, exercise, medications and tobacco consumption) 2) Questions related to the performance gathered through interviews. Data was analyzed by descriptive statistics and chi-square tests. The sample consisted of 67 (70.53%) males and 28 (29.42%) females. 71 (75.8%) subjects were married and the rest were single. 56 (58.8%) subjects had a high fat and salty diet, 33% had consumed animal fats and the rest had consumed fruits and vegetables in their diet. Patients' performance on taking antihypertensive medications showed that 91.8% were taking medication, but the rest not. The study showed that there is a statistically significant relationship between poor performance and hypertension in the study population, which can be prevented by modifying people's lifestyle and performance.

**Key words:** Hypertension, lifestyle modification, Patients' performance.

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Hypertension is the major risk factor for cardiovascular disease and one of the most important factors of mortality in industrialized and Third World countries<sup>1</sup>. This common and asymptomatic disease is easily controlled and treated, if untreated, can lead to fatal complications

and premature death and severe disabilities in millions of humans<sup>2</sup>. High blood pressure tends to cluster in families. The disease depends on some factors, such as age and sex, so that the more the age, the more the disease and it is more common in African Americans than whites and more common in young men than women. Of course, such a difference disappears in the age group of 55 and is vice versa in 75<sup>3</sup>. The most common cause of death in Iran is now related to cardiovascular diseases, so that 300 of 800 deaths occur due to

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cardiovascular diseases, including high blood pressure<sup>4</sup>. Environmental factors such as salt intake, obesity, alcohol consumption, stress and lifestyle are specifically involved in the formation of hypertension, and also in its increase with age in most countries. High risk factors of hypertension are classified in two groups of modifiable and non-modifiable: The non-modifiable factors include family history, age, sex, race, and modifiable factors are stress, obesity, diet, tobacco use, alcohol use, high blood sugar, inactivity and long-term use of oral contraceptives<sup>5</sup>. It is absolutely necessary to have a favorable performance on the incidence of hypertension in a region and identify associated risk factors in order to manage preventive strategies. This study was designed to evaluate the performance of patients with hypertension, based on the national program to prevent and control the disease in Tarom City.

## METHODS

The study was conducted as cross-sectional descriptive survey on 95 patients with hypertension in Zanjan University of Medical Sciences. The study population consisted of all patients with hypertension referred to Shohadaye Tarom Hospital. The subjects were selected using simple purposive random sampling among qualified individuals in a period of 25 days in the departments of emergency, men and women's hospitalization wards, I.C.U and C.C.U. in Shohadaye- Tarom Hospital, affiliated with Zanjan University of Medical Sciences. Data was obtained through a questionnaire consisting of two parts: Part 1: questions regarding demographic features and lifestyle, Part 2: some expressions to determine the performance of study units. Part 1 consisted of 8 questions on demographic features, including (age, body mass index, sex, education, occupation, marital status, income, housing situation and questions about patient's condition, diet, sleep and rest, activity, prescribed drug use and menopause age in women). Part 2 consisted of 21 expressions associated with the performance of study units. To measure the performance of study units, the maximum score was belonged to 85 and the minimum to zero, which was turned into base 100. Then, performance levels were categorized into three levels of good, average and poor based on

the scores obtained, so that the highest score was considered good and the lowest was weak. Test - retest method was used to determine the reliability of the questionnaire. In this case, the questionnaires were given to ten patients with considered conditions for research units in two stages with interval of ten days. The correlation between the results of two stages was then determined, and used after the approval of professors. It should be noted that they were excluded from the main sample. Then, the correlation between the results of two phases was determined and approved by statistics advisor ( $r=0.82$ ). The internal consistency of the questionnaire was confirmed with Cronbach's alpha 0.71. Data collected was analyzed using SPSS software, descriptive statistics methods (tables and graphs), and chi-square test.

## RESULTS

The sample consisted of 67 (70.53%) males and 28 (29.42%) females. 71 (75.8%) subjects were married and the rest were single. 44 (47.3%) were illiterate and the rest had primary, middle and high school educations. 57.9% were house-keeper. 75.8% were farmer and the rest were self-employed. The mean body mass index was 28.06 kg with  $SD=3.72$ . However, it is close to the normal range, it can be said that samples are somewhat overweight. The study of patients' feeding behavior showed that more than half of the sample had a high fat and salty diet without much compliance. 56 (58.8%) subjects had consumed a high fat and salty diet, 33.28% fast food, 33% animal fats and the rest had fruits and vegetables in their diet. Patients' performance on taking antihypertensive medications showed that 91.8% were taking medication, but the rest not. The findings show that 0.43% had regular light exercise and 50% reported a history of heavy exercise and the rest did not mention a specific sport. Based on the results, patients were studied from different areas, including diet (high in fat and salt, animal fat consumption, taking fast food, and consumption of vegetables, activity and drug). And on this basis, the overall performance of the sample was low and only 30 (29.9%) had acceptable performance and others had poor performance.

**DISCUSSION**

hypertension is a risk in modern societies and one of the major health problems. This study was designed to evaluate the performance of patients with hypertension in Tarom. The results of the present study regarding the performance of patients with hypertension differ with findings of the study conducted by Sohrabi et al. in 2007 in Damavand. It seems that more people in Damavand had a good performance because of their proximity to the capital and access to information<sup>6</sup>. But more than half of people in Tarom didn't have a good performance in hypertension control due to the poor educational facilities, lack of high education and lack of access to information resources. The difference may be related to differences in the performance of network services system or service providers in Damavand. The findings of the current study showed that there is a significant relationship between poor performance and increased risk of hypertension per year increase in the risk of hypertension which is consistent with the study of Naeemi et al. in 2010 in Boyer Ahmad<sup>7</sup>. The findings are also consistent with the study regarding the Prevalence of prehypertension and hypertension and associated risk factor among turkish adults:trabozon hypertension study, *Journal of public health in 2008 in Turkey*<sup>8</sup>. Najjar et al 2005 conducted a case-control study entitled "The relationship between lifestyle and early hypertension in Sabzevar" that its results are somewhat similar to the present study<sup>9</sup>. Based on these results, the overall performance of samples is low. Over 55% of patients consume high fat and salty food which is not good for blood pressure. It seems that proper solutions for patients' better performance should be included in authorities' agenda. The results of the present study is consistent with the results of Itamar et al 2008 Hypertension and socioeconomic status<sup>10</sup>. The results of this study and similar ones indicate that the need to increase awareness and attention to prevention programs corresponds with better performance in patients and society.

**CONCLUSION**

Overall, this study shows that hypertension patients' performance don't match with standards in the fields such as diet, regular use of drugs, exercise and tobacco consumption. Therefore, further studies and better planning are recommended to improve patient's performance.

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