



## **Symposium on Life and Environmental Sciences**

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### **STUDY OF THE TENDENCY TO TREATMENT OF PATIENTS WITH CHRONIC DISEASES OF THE CARDIOVASCULAR AND RESPIRATORY SYSTEM**

**(on the example of the Samarkand region)**

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#### **Abstract**

The article examines the adherence to treatment among the population living in the district center, using the example of Samarkand region, for hypertension, ischemic heart disease, chronic heart failure, bronchial asthma, and chronic obstructive pulmonary diseases. This indicator was assessed using the widely used Morisky-Green questionnaire in the world. The reasons for patients' low propensity for treatment were indicated. Non-compliance with indications that are directly related to the patient and insufficient interaction between the doctor and the patient. Successful management of chronic diseases requires not only effective treatment but also active patient participation in the treatment process. One of the main factors determining the effectiveness of treatment for non-communicable chronic diseases is predisposition to treatment. Improving this indicator will help improve the quality of life of patients, reduce the number and duration of hospitalizations, costs, and mortality.

**Keywords:** Hypertension, ischemic heart disease, chronic heart failure, bronchial asthma, chronic obstructive pulmonary disease, predisposition to treatment.



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Among the numerous reasons for the negative outcomes of chronic diseases are patients' adherence to treatment and doctors prescribing generally accepted standard, proven effective medications for existing conditions. According to recommendations by world health experts, treatment adherence refers to "patients regularly taking procedures prescribed by a doctor at the necessary doses and intervals" [8]. The importance of this issue was first highlighted by the World Health Organization in 2003, which showed that in developed countries, the adherence of patients with chronic diseases to long-term treatment averages 50%, while in developing countries it is even lower [3].

Colandanvelu et al. (2014) referred to the above-mentioned situations as a "pandemic of non-adherence to treatment recommendations."

Currently, non-compliance with or inadequate implementation of doctors' recommendations is considered a proven risk factor for all diseases. This is because such a situation reduces treatment effectiveness, increases costs, raises the likelihood of various complications, and negatively affects disease outcomes and life expectancy [1].

**Purpose of the study:** A comparative study on the adherence to treatment among patients with common chronic diseases in primary healthcare facilities of district centers in Samarkand region.

**Research materials and methods:** Our study involved 1,012 patients diagnosed with hypertension (HT), coronary heart disease (CHD), chronic heart failure (CHF), bronchial asthma (BA), and chronic obstructive pulmonary disease (COPD) residing in the district center of the Samarkand region. The average age of the patients included in the study was  $58.7 \pm 4.72$  years, comprising 439 men and 573 women. Of these, 203 patients with hypertension, 200 with coronary



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heart disease, 200 with chronic heart failure, 209 with bronchial asthma, and 200 with chronic obstructive pulmonary disease were observed. In accordance with the goals and objectives set for our scientific work, the adherence to treatment of patients with common chronic diseases in primary healthcare institutions was assessed using the Morisky-Green questionnaire.

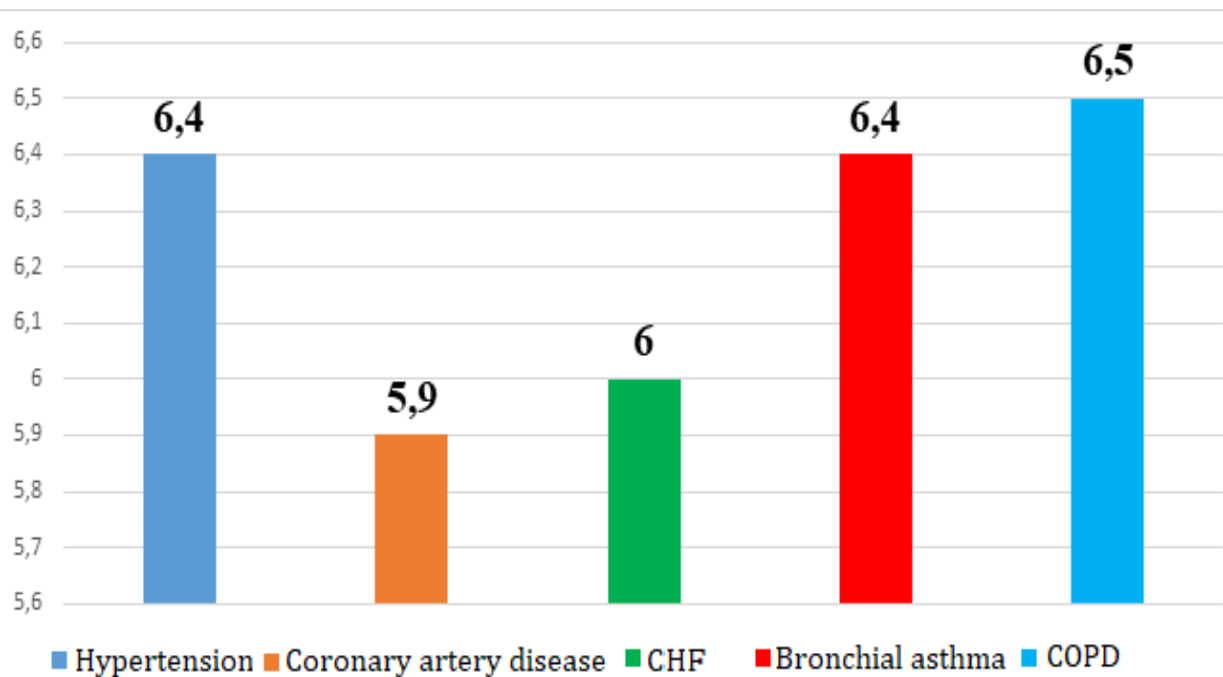


Figure 1. Treatment adherence indicators among patients residing in the observed village, as determined using the Morisky-Green questionnaire (score).



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As shown in the figure, among the district population, the adherence to treatment determined by questionnaire was  $6.4 \pm 0.3$  points for patients with hypertension,  $5.9 \pm 0.3$  for coronary heart disease,  $6.0 \pm 0.2$  for chronic heart failure,  $6.4 \pm 0.2$  for bronchial asthma, and  $6.5 \pm 0.2$  for chronic obstructive pulmonary disease. When comparing the studied diseases, no significant difference ( $p > 0.05$ ) was observed between them.

The results of the Morisky-Green questionnaire showed that patients with cardiovascular and respiratory system diseases in the district center have low to medium adherence to treatment. It should be particularly emphasized that this indicator is lower in patients with coronary heart disease and chronic heart failure compared to patients with other diseases. Conversely, a relatively higher adherence to treatment for respiratory system diseases was found in the district center. Naturally, such a situation leads to frequent exacerbations of the existing disease, occurrence of complications, increase in the number and duration of patient rehospitalizations, and ultimately, a sharp increase in treatment costs. Therefore, it is of great practical importance to intensify scientific observations aimed at increasing patients' adherence to treatment and to develop recommendations that are convenient for both patients and doctors.

In patients living in the observed district center, along with harmful habits, other risk factors were also comparatively studied, and the obtained results are presented in Figure 2 below.



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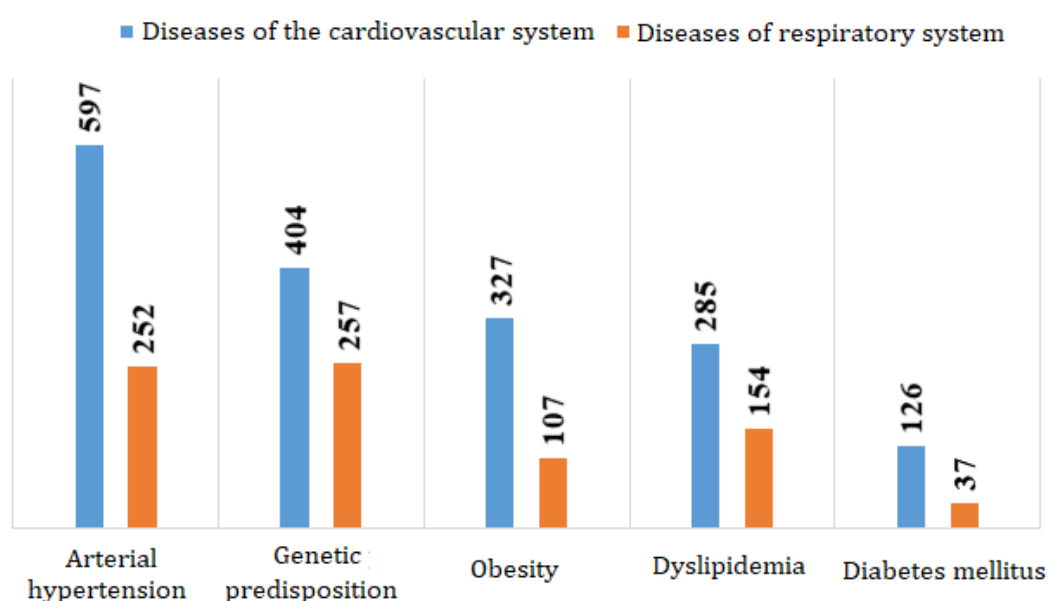


Figure 2. Distribution of risk factors among patients living in the district center who have been diagnosed with common cardiovascular and respiratory system diseases (in absolute numbers, n=1012).

The prevalence of risk factors was studied in a general comparative analysis for all observed patients with cardiovascular and respiratory system diseases. Among them, 597 (99.0%) had arterial hypertension, 404 (66.9%) had hereditary predisposition, 402 (66.7%) had obesity, 310 (51.4%) had dyslipidemia, and 203 (17.0%) had diabetes mellitus. In patients with respiratory system diseases, the aforementioned risk factors were observed in 252 (61.6%), 257 (62.8%), 107 (26%), 154 (37.6%), and 37 (9%) patients, respectively.

When comparing the results for diseases of both systems, it was observed that arterial hypertension was significantly more common in patients with cardiovascular diseases than in those with bronchial asthma and chronic



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obstructive pulmonary disease ( $x^2=239.8$ ,  $p<0.001$ ). Furthermore, it was found that common risk factors among the population, such as hereditary predisposition ( $x^2=0.8$ ,  $p=0.369$ ), obesity ( $x^2=73.9$ ,  $p<0.001$ ), and diabetes mellitus ( $x^2=23.9$ ,  $p<0.001$ ), were significantly more prevalent in patients with cardiovascular diseases.

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