

ISSN 2616-4868

ISSN 3041-1521 Online

UDC 614.21

КЛІНІЧНА ТА ПРОФІЛАКТИЧНА МЕДИЦИНА

НАУКОВИЙ МЕДИЧНИЙ ЖУРНАЛ

CLINICAL AND PREVENTIVE MEDICINE

SCIENTIFIC MEDICAL JOURNAL

№ 2 (40) / 2025

ЗАСНОВНИК:

Державна наукова установа «Центр інноваційних технологій охорони здоров'я» Державного управління справами

FOUNDER:

State Institution of Science «Center of innovative healthcare technologies» State Administrative Department

Головний редактор – Дячук Д.Д.

Заступник головного редактора – Ященко Ю.Б.

Відповідальний секретар – Кондратюк Н.Ю.

Провідний редактор – Грішин В.Б.

Науковий редактор – Міхалєв К.О.

Літературний редактор – Машкіна О.М., Бобрівська Д.Є.

Chief Editor – Diachuk D.D.

Deputy Editor-in-Chief – Yaschenko Yu.B.

Responsible secretary – Kondratiuk N.Yu.

Leading editor – Grishyn V.B.

Scientific editor – Mikhailiev K.O.

Copy editor – Mashkina O.M., Bobrivska D.E.

РЕДАКЦІЙНА КОЛЕГІЯ

Дячук Д.Д. (Україна)

Ященко Ю.Б. (Україна)

Кондратюк Н.Ю. (Україна)

Васильєва Т.Л. (США)

Квасніський М.В. (Україна)

Литвин О.В. (Україна)

Мороз Г.З. (Україна)

Бевзенко Т.Б. (Україна)

Буряк О.Г. (Україна)

Сафа Гурсой (Туреччина)

Крячкова Л.В. (Україна)

Курик О.Г. (Україна)

Шкорботун Я.В. (Україна)

Бленд Сара (США)

Ященко Олексій (США)

Гладких Ф.В. (Україна)

Дабровський Войцех (Польща)

Ткаченко Р.П. (Україна)

Грузєва Т.С. (Україна)

Головко С.В. (Україна)

EDITORIAL BOARD

Diachuk D.D. (Ukraine)

Yaschenko Y.B. (Ukraine)

Kondratiuk N.Y. (Ukraine)

Vasylyeva T.L. (USA)

Kvasnitskyi M.V. (Ukraine)

Lytvyn O.V. (Ukraine)

Moroz G.Z. (Ukraine)

Bevzenko T.B. (Ukraine)

Buryak O.G. (Ukraine)

Safa Gursoy (Turkey)

Kriachkova L.V. (Ukraine)

Kurik O.G. (Ukraine)

Shkorbotun Y.V. (Ukraine)

Bland Sarah (USA)

Yaschenko Alex (USA)

Hladkykh F. V. (Ukraine)

Dabrowski Wojciech (Poland)

Tkachenko R. P. (Ukraine)

Gruzieva T.S. (Ukraine)

Golovko S.V. (Ukraine)

РЕДАКЦІЙНА РАДА

Голова редакційної ради *Дячук Д.Д.*

Вдовиченко Ю.П. (Україна)

Коваленко В.М. (Україна)

Кузнєцова С.М. (Україна)

Лазорішинєць В.В. (Україна)

Лурін І.А. (Україна)

Нєтяженко В.З. (Україна)

Пархоменко О.М. (Україна)

Страфун С.С. (Україна)

Усенко О.Ю. (Україна)

Файнзільберг Л.С. (Україна)

Черній В.І. (Україна)

Шевцов А. Г. (Україна)

EDITORIAL COUNCIL

Head of the editorial council *Diachuk D.D.*

Vdovichenko Yu.P. (Ukraine)

Kovalenko V.M. (Ukraine)

Kuznetsova S.M. (Ukraine)

Lazorishinets V.V. (Ukraine)

Lurin I.A. (Ukraine)

Netyazhenko V.Z. (Ukraine)

Parkhomenko O.M. (Ukraine)

Strafun S.S. (Ukraine)

Usenko O.Yu. (Ukraine)

Fainzilberg L.S. (Ukraine)

Cherniy V.I. (Ukraine)

Shevtsov A.G. (Ukraine)

Адреса редакції:

01014, м. Київ, вул Верхня, 5, Україна

Тел. (044) 254-68-71, e-mail: mag.cp.medical@gmail.com

<http://www.cp-medical.com>

Періодичність виходу – 8 разів на рік

Свідцтво про внесення суб'єкта господарювання

до державного реєстру видавців, виготовлювачів

і розповсюджувачів видавничої продукції ДК №8195

Рекомендовано до друку Вченою радою ДНУ «ЦІТОЗ»

ДУС (протокол №1 від 20.02.25 р.)

Підписано до друку 21.02.2025 р.

Видавець – Державна наукова установа «Центр

інноваційних технологій охорони здоров'я»

Державного управління справами

Журнал входить до списку друкованих (електронних)

періодичних видань, що включаються до Переліку

наукових фахових видань України категорія «А»

(Наказ МОН від 10.12.2024 року № 1721).

Ідентифікатор друкованого медіа в Реєстрі R30-02194

Усі статті обов'язково рецензуються.

Цілковите або часткове поширення

в будь-який спосіб матеріалів, опублікованих у цьому

виданні, допускається лише з письмового дозволу редак-

ції. Відповідальність за зміст рекламних матеріалів несе

рекламодавець.

© Державна наукова установа «Центр

інноваційних технологій охорони здоров'я»

Державного управління справами



State Institution of Science
«Center of innovative healthcare
technologies» State Administrative
Department

Надруковано в типографії: ФОП Лівак У.М., м. Чернівці, вул. Головна, 244/ 5. Свідцтво: серія ДК-7505, від 8.11.2021 р.

Наклад 500 прим. Ум. друк. арк.: 16,1. Зам. №35-2025.

ЗМІСТ

№ 2 (40)

КЛІНІЧНА МЕДИЦИНА

Олександр І. Винниченко, Роман А. Москаленко,
Юлія В. Москаленко

РАК ЛЕГЕНЬ В УКРАЇНІ 6

<https://doi.org/10.31612/2616-4868.2.2025.01>

Васіф В. Рахманов

**ОЦІНКА ФУНКЦІОНАЛЬНИХ
РЕЗУЛЬТАТІВ ЛІКУВАННЯ ПАЦІЄНТІВ
З РАКОМ РОТОГЛОТКИ III-IV СТАДІЇ..... 14**

<https://doi.org/10.31612/2616-4868.2.2025.02>

Микола М. Малюченко, Петро А. Гасюк,
Анна Б. Воробець, Тетяна І. Дзецюх, Дмитро Д. Кіндій,
Юрій А. Гасюк, Павло М. Малюченко

**МОРФОЛОГІЧНІ ЗМІНИ ДЕНТИНУ
ЗУБА ПРИ РІЗНИХ СТУПЕНЯХ
СТЕРТОСТІ ТА ЇХ ВПЛИВ НА ВИБІР
ОРТОПЕДИЧНОГО ЛІКУВАННЯ 23**

<https://doi.org/10.31612/2616-4868.2.2025.03>

Анна Ю. Шкандала, Олег В. Зеленчук,
Сергій М. Фуркало, Борис М. Тодуров, Андрій В. Хохлов,
Наталія О. Яценко, Сергій М. Судакевич

**ПОРІВНЯЛЬНИЙ АНАЛІЗ ЯКОСТІ
ЖИТТЯ ПІСЛЯ ЕНДОВАСКУЛЯРНОГО
ПРОТЕЗУВАННЯ АОРТИ
ТА ОПТИМАЛЬНОЇ
МЕДИКАМЕНТОЗНОЇ ТЕРАПІЇ
У ПАЦІЄНТІВ З НЕУСКЛАДНЕНОЮ
ДИСЕКЦІЄЮ НИЗХІДНОГО ВІДДІЛУ
ГРУДНОЇ АОРТИ ТИПУ В..... 31**

<https://doi.org/10.31612/2616-4868.2.2025.04>

ДОСЛІДЖЕННЯ

Володимир М. Богомаз, Тетяна Є. Стародуб

**ОЦІНКА МЕДИЧНИХ ПОТРЕБ
ПАЦІЄНТІВ ПІСЛЯ ХОЛЕЦИСТЕКТОМІЇ 41**

<https://doi.org/10.31612/2616-4868.2.2025.05>

Катерина П. Потапова, Лариса І. Соколова

**ВИВЧЕННЯ РОЛІ МІКРОБІОТИ
КИШКІВНИКА У ПАЦІЄНТІВ
З РОЗСІЯНИМ СКЛЕРОЗОМ
В УКРАЇНСЬКІЙ ПОПУЛЯЦІЇ:
ПОПЕРЕЧНЕ ДОСЛІДЖЕННЯ 49**

<https://doi.org/10.31612/2616-4868.2.2025.06>

Галина Г. Марараш, Жанетта А. Чорненька,
Діана І. Собко, Ігор В. Навчук, Тетяна І. Доманчук

**АНАЛІЗ ПСИХОСОЦІАЛЬНИХ ФАКТОРІВ,
ЯКІ ВПЛИВАЮТЬ НА ЯКІСТЬ ЖИТТЯ
ХВОРИХ НА АРТЕРІАЛЬНУ ГІПЕРТЕНЗІЮ 58**

<https://doi.org/10.31612/2616-4868.2.2025.07>

Тамара С. Вацеба, Любов К. Соколова,
Володимир М. Пушкар'юв, Мар'яна О. Вацеба,
Василь Є. Нейко, Валентина В. Дзвонковська

**МАТЕМАТИЧНА МОДЕЛЬ ЯК МЕТОД
ОЦІНКИ АКТИВАЦІЇ ОНКОГЕНЕЗУ
У ХВОРИХ З ЦУКРОВИМ ДІАБЕТОМ 2 ТИПУ 68**

<https://doi.org/10.31612/2616-4868.2.2025.08>

Олена В. Литвин, Ольга Є. Коваленко

**ПСИХОЕМОЦІЙНІ РОЗЛАДИ
У ПАЦІЄНТІВ З ДИСЦИРКУЛЯТОРНОЮ
ЕНЦЕФАЛОПАТІЄЮ ТА ГІПОТИРЕОЗОМ
ЗА ДАНИМИ ПРОСПЕКТИВНОГО
ДОСЛІДЖЕННЯ 74**

<https://doi.org/10.31612/2616-4868.2.2025.09>

Костянтин В. Шевченко, Галина А. Єрошенко,
Альона С. Григоренко, Олена В. Клепеч, Олена Б. Рябушко, Валентина М. Соколенко,
Наталія М. Шарлай

**МОРФОЛОГІЧНІ ОСОБЛИВОСТІ
ЗАЛОЗ ПІДСЛИЗОВОЇ ОСНОВИ
ДВНАДЦЯТИПАЛОЇ КИШКИ ЩУРІВ
ЗА ВПЛИВУ КОМПЛЕКСУ ХАРЧОВИХ
ДОБАВОК..... 80**

<https://doi.org/10.31612/2616-4868.2.2025.10>

Олена Ю. Ісасенко, Валерій В. Мінухін,
Дмитро В. Мінухін, Денис О. Євтушенко,

Артем С. Лавріненко, Василь Г. Грома

**МЕТАБОЛІТНИЙ КОМПЛЕКС
ЛАКТОБАКТЕРІЙ ЩОДО ІНФІКОВАНИХ
МУЛЬТИРЕЗИСТЕНТНИМ ШТАМОМ
LELLIOTTIA AMNIGENA РАН В УМОВАХ
IN VIVO 86**

<https://doi.org/10.31612/2616-4868.2.2025.11>

Ярослава В. Бондаренко, Юлія В. Деєва

**ПАТОФІЗІОЛОГІЧНІ МЕХАНІЗМИ
РОЗВИТКУ ПОРУШЕНЬ СЛУХУ У ДАЙВЕРІВ 94**

<https://doi.org/10.31612/2616-4868.2.2025.12>

ANALYSIS OF PSYCHOSOCIAL FACTORS AFFECTING THE QUALITY OF LIFE OF PATIENTS WITH ARTERIAL HYPERTENSION

Halyna G. Mararash¹, Zhanetta A. Chornenka¹, Diana I. Sobko², Ihor V. Navchuk¹, Tetyana I. Domanchuk¹

¹Department of Social Medicine and Public Health, Bukovynian State Medical University, Chernivtsi, Ukraine

²Department of physical rehabilitation, occupational therapy and pre-medical care of the Yuriy Fedkovich Chernivtsi National University, Chernivtsi, Ukraine

Abstract

Introduction. In recent years, in Ukraine, the role of socio-economic factors in the mechanisms of arterial hypertension (AH), which provide for socially determined economic factors, has been increasing. The level of health of citizens, and accordingly the average duration of their quality life, is formed under the influence of such internationally recognized components: natural, socio-economic, socio-political, preventive conditions and medical care. According to the WHO, 1,130 million people worldwide suffer from AH, and most of them (about two-thirds) live in low- and middle-income countries; in 2015, AH affected 1 in 4 men and 1 in 5 women; only 1 in 5 people with AH control the condition; AH is one of the main causes of premature death in the world. The research is aimed at studying the role of medico-social and social factors, general well-being, and the level of quality of life in patients with AH and shows that AH definitely worsens their quality of life, which is characterized by a decrease in indicators of both physical and psychological conditions.

Aim. To conduct an analysis of psychosocial factors affecting the quality of life of patients with hypertension.

Materials and methods. In total, 120 patients with diagnostically confirmed hypertension aged 23 to 79 years participated in the study, among whom 56.67% were women and 43.33% were men. The main part of patients, 60.83%, had AH of the first degree, 24.17% of the second, and 15% of the third degree. A questionnaire was conducted among all respondents to study the influence of medical and social factors on the development, course and quality of life of patients with hypertension.

Results. Among the patients with AH who participated in the study, the preference was for persons with secondary special education and those who work (71.62%), with excellent and good sanitary and technical conditions (60.47%) and satisfactory and poor psychological working conditions (39.53%), with an average material condition (42.5%) and a fluctuation in the level of quality of life from very high to extremely low, and deterioration of the quality of life of patients with AH was established, which, accordingly, causes a decrease in indicators of both physical and psychological conditions.

Conclusions. AH worsens the quality of life of patients, so it is necessary to develop the patient's ability to understand, control and correct risk factors for cardiovascular diseases.

Keywords: arterial hypertension, medical and social factors, risk factors, quality of life

INTRODUCTION

AH remains the most common non-infectious disease in the world, leading to temporary and permanent disability and mortality, regardless of a country's status or the income level of its citizens. It is the main cause of complications such as stroke, myocardial infarction, and hypertensive crisis [1]. Approximately 30.0% of the

adult population in Europe suffers from AH, making it responsible for nearly 7.5 million deaths per year in this region. Additionally, it is the most common diagnosis encountered in emergency medicine services.

According to expert forecasts, the number of patients with AH will continue to rise, reaching approximately 1.5 billion people by 2025. Among individuals over 60 years

of age, the prevalence of AH exceeds 60.0%. High blood pressure accounts for 9.4 million annual deaths, or 16.5% of all deaths, including 51.0% of deaths from strokes and 45.0% of deaths from coronary heart disease [2, 3, 4, 5, 6].

In the structure of circulatory system diseases, AH (in all its forms) has the highest prevalence, accounting for 55.9%. Among people of working age, its prevalence is 36.7% [7]. In this regard, elevated blood pressure is considered a significant risk factor for target organ damage, which directly influences a patient's prognosis and remains a leading cause of disability and mortality in the working-age population [8, 9, 10].

In Ukraine, there are more than 12 million patients with AH, which is almost 30.0% of the adult population, and more than 45.0% do not know that they have high blood pressure. Among those who know, 50.0% are treated only for a month, only 14.0% constantly. In addition to cardiovascular complications, AH contributes to early aging, memory and intelligence decline, accompanies obesity, diabetes, atherosclerosis, which often develops already at the age of 40-50. It should be noted that the percentage of people with adequate control of elevated blood pressure remains very low in the population, and, accordingly, the risks of developing cardiovascular complications (coronary heart disease, heart failure, atrial fibrillation, stroke, peripheral artery disease, kidney failure) remain uncontrolled [11].

A review of scientific publications shows that the modern strategy for the prevention and treatment of AH involves taking into account the mechanisms of influence of various risk factors, in particular those caused by lifestyle, including stressful events, chronic stress at work, lack of social support, low socioeconomic status, tension in family relations, etc. In particular, early detection and correction will significantly improve the cardiovascular prognosis [12].

AIM

To conduct an analysis of psychosocial factors affecting the quality of life of patients with AH.

MATERIALS AND METHODS

A total of 120 patients with hypertension were included in the study. Inclusion criteria were diagnosed AH (verification of the diagnosis was carried out on the basis of complaints, anamnestic data, as well as with the help of clinical, laboratory and instrumental research methods) and informed written consent of the patient to participate in the study. The examined patients were aged from 23 to 79 years; the average age was 48.33 ± 12.93 years. Among the examined patients, the majority were women (68 (56.67%) women and 52 (43.33%) men). The main part of the patients, 73 (60.83%), had hypertension of the first degree, less than 29 (24.17%) of the second and 18 (15.0%) of the third degree.

The work was performed on the basis of the Municipal Polyclinic № 1 in Chernivtsi in accordance with the agreement signed between the institutions. The work was carried out based on generally accepted international and domestic legal documents: the main standards of GCP (Good Clinical Practice, 1966); The Helsinki Declaration of the World Medical Association on the ethical principles of conducting scientific medical research with human participation (1964-2004) in compliance with the requirements of the orders of the Ministry of Health of Ukraine № 690 dated 23.09.2009 and № 523 dated 12.07.2012).

The research map and the patient's informed consent form were approved by the Biomedical Ethics Commission of the Higher State Educational Institution of Ukraine «Bukovynian State Medical University» (protocol № 2 dated 19.10.2019).

A survey of research subjects was conducted to identify risk factors (hereditary predisposition, socio-economic status, profession, lifestyle: daily routine, bad habits, use of table salt, physical activity, etc.); duration of the disease, data on the success of previous treatment. In order to identify and analyze psychosocial factors, the «Questionnaire for the study of medical and social factors influencing the development and course of HSC» was used [7]. In our opinion, this questionnaire was very convenient for determining medical and social factors that affect the formation and preservation of health, namely: age, marital status and relationships, well-being, income, quality of nutrition and physical activity, bad habits, level of culture and lifestyle, education, professional employment status, access to medical care, hereditary diseases, determination of physiological needs of a person. Also, this questionnaire is easy to process and is aimed at patients with diseases of the circulatory system.

All respondents were divided into 2 groups of patients: the I group (main) – 68 (56.7%) people with well-controlled AH who participated in the initial program on hypertension prevention – accordingly possessed a high level of awareness and practical skills regarding the rational treatment of the disease, prevention of complications and improvement of quality of life; II group (control) – 52 (43.3%) persons with uncontrolled AH, who, accordingly, did not participate in the initial program.

Statistical processing of the material was carried out using the software «Excel» (Microsoft, USA) and «STATISTICA 10», in particular Pearson's χ^2 using parametric and non-parametric methods of evaluating the obtained data.

RESULTS

The duration of AH varied widely, but many patients (82.0%) had been ill for more than 10 years. All examined patients were city residents. Depending on the level of blood pressure increase, AH of the 1st and 2nd degree

predominated among the examined individuals. A strong hereditary predisposition was established in 62.5% (75 people), while in 37.5% (45 people), no such disease was recorded among their closest blood relatives.

Dietary habits, particularly the composition of foods predominant in a person's diet, significantly affect bodily functions. The survey results revealed an insufficient intake of vegetables, fruits, and fish: only 31 (25.83%) participants consumed the recommended amount of vegetables daily, while sea fish three or more times a week was consumed by just 15 (12.5%) respondents. Additionally, 35 (29.17%) people, mostly men, consumed salty and spicy foods 2-3 times a week.

It is well known that one of the nutritional factors negatively influencing AH development is excessive table salt consumption. It was found that 72 patients (60.0%) exceeded the recommended daily intake of 5 g of salt. Patients in Group I consumed nearly twice as much salt (39.2%) as those in Group II (20.8%) ($p < 0.05$). Excessive salt consumption was more common among men (71.15%) compared to women (51.47%), particularly in older individuals.

Other important factors influencing disease progression include bad habits, particularly smoking and

alcohol consumption. Analysis of these factors led to the following conclusions: 42 individuals (35.0%) reported smoking, including 36 men (85.71%) and 6 women (14.29%). Regarding alcohol consumption, 83 individuals (69.16%) reported drinking with the following frequency: 2-3 times a week – 8 (6.67%), several times a month – 38 (31.67%), several times a year – 36 (30.0%), and daily – only 1 person (0.83%).

The level of education plays an important role in the development of hypertension, as it affects the ability of patients to adequately perceive their disease and to form an attitude towards the issues of treatment and prevention. The level of education of the respondents was found out: incomplete secondary education for 5 people (4.17%), secondary education for 24 people (20.0%), special secondary education for 46 people (38.33%; mostly among women 47.06%), incomplete higher education for 10 (8.33%) and higher education for 35 people (29.17%; mostly among men 40.38%). There was no particular difference in the level of education of the respondents of the I and II groups – there was a slight predominance of persons with incomplete higher education in the first group and secondary special education in the second. Therefore, the majority of the interviewees have a special secondary education, while a smaller number have higher education (Fig. 1).

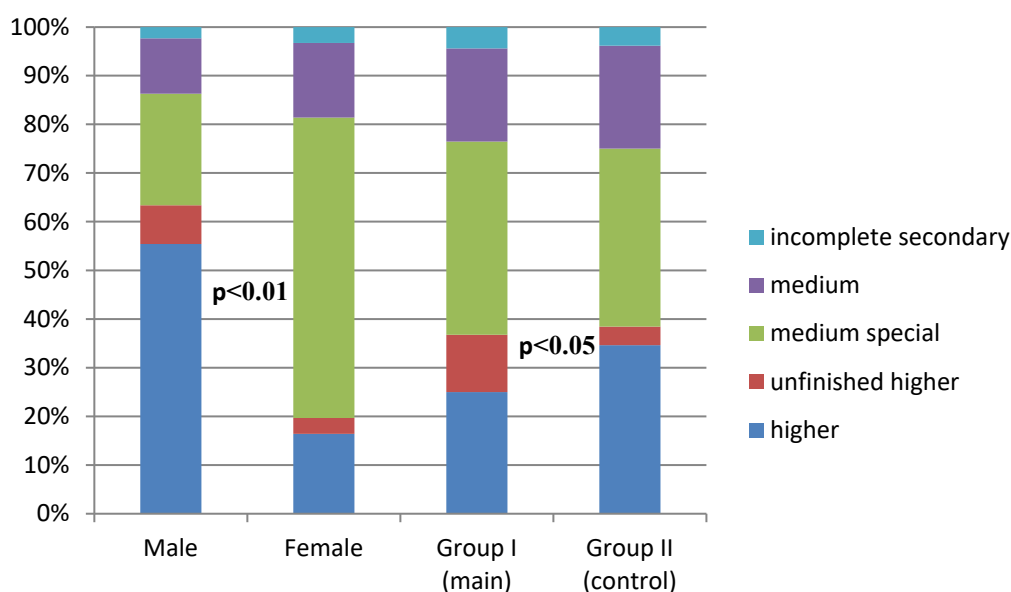


Figure 1. Level of education of patients.

Strenuous and long-term work is a factor that induces changes in the cardiovascular system, which are initially adaptive in nature, but may later lead to maladaptive processes that contribute to disease development.

Labour activity was assessed in all patients, including sanitary-technical and psychological working conditions, as well as social status. The analysis of social status showed that 86 (71.62%) of the patients

were employed. The largest group of respondents, 53 individuals (44.17%), worked full-time, which constituted the majority ($p < 0.05$) compared to the unemployed (13 individuals, 10.83%) and pensioners (21 individuals, 17.5%). Additionally, 33 individuals (27.5%) had part-time employment (Fig. 2). The greatest difference in professional employment was observed among the unemployed and retirees, who predominated in the main group, with almost 1.5 times more patients in Group II engaged in partial employment.

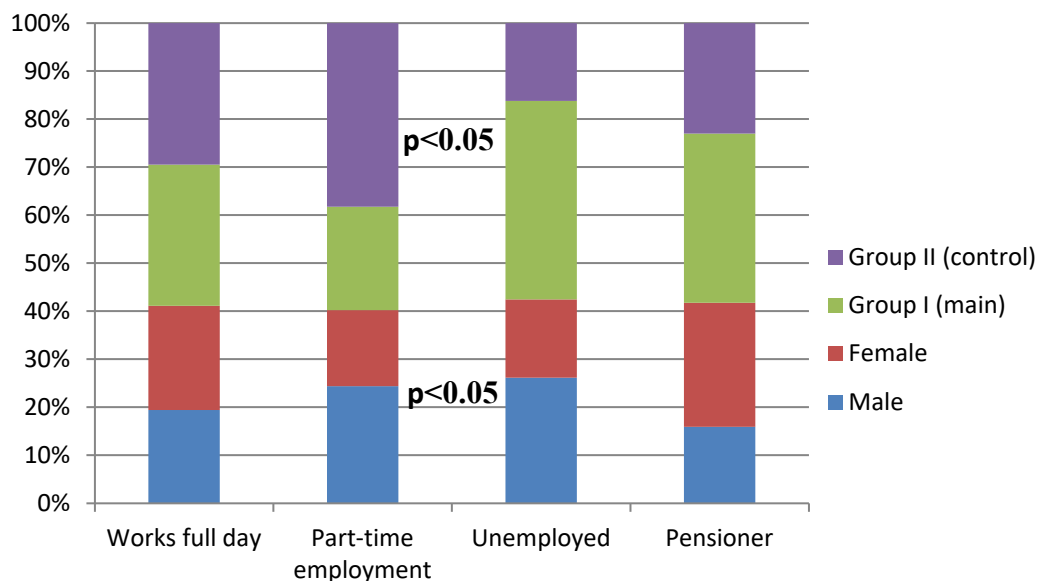


Figure 2 Professional employment of patients.

Patients rated satisfaction with sanitary and technical conditions at work on a ten-point scale (Fig. 3). According to the results of the survey, 19 (22.09%) respondents indicated excellent (9-10 points) working conditions, 33 (38.37%) – good (7-8 points), satisfactory (5-6 points) – 22 persons (25.58%) and 12 people (13.96%) – poor working conditions. The percentage of patients (61.62%) who consider the sanitary and technical

working conditions to be excellent and good prevails. The percentage of respondents with satisfactory and poor (4 or less points) working conditions is approximately 1.5 times lower (39.53%). It was reliably found that among women and respondents of the Group II, the percentage of people who were satisfied with working conditions prevailed, $p < 0.05$, compared to those who considered such conditions to be bad.

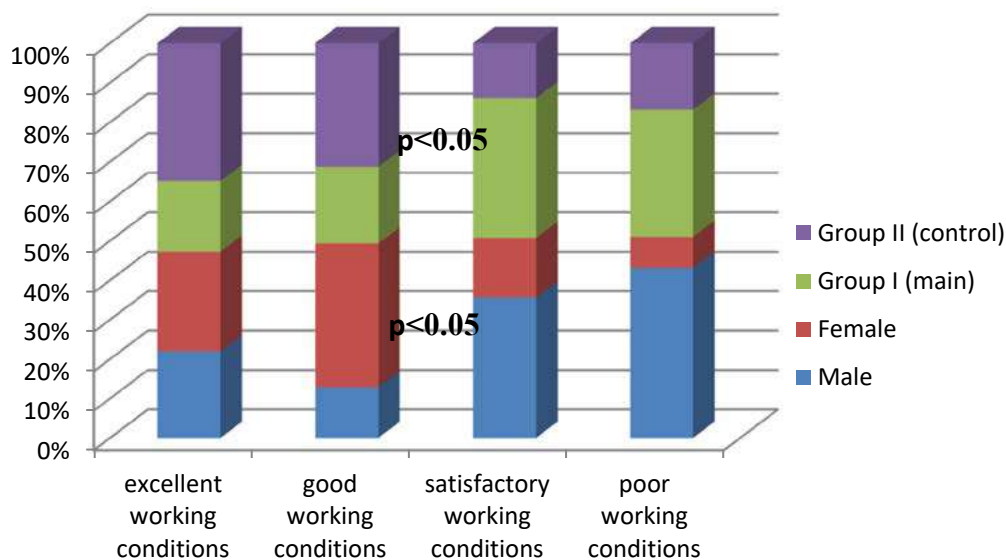


Figure 3. Satisfaction with sanitary and technical conditions at work.

Among the main reasons for satisfactory and poor psychological working conditions, the respondents indicated conflict with colleagues and managers, high volume of work and responsibility, managerial position, work with a large number of people, forced stay in the relevant position due to financial difficulties, low pay, the need to complete work before retirement. All these factors can contribute to psycho-emotional

stress. Psychological working conditions were assessed on a ten-point scale, where 10 is the least stressful condition (Fig. 4). According to the results of the survey, excellent (9-10 points) psychological working conditions were noted by 14 people (16.28%), good (7-8 points) by 26 people (30.23%), satisfactory (5-6 points) by 27 persons (31.4%) and bad (4 or less points) – 19 persons (22.09%).

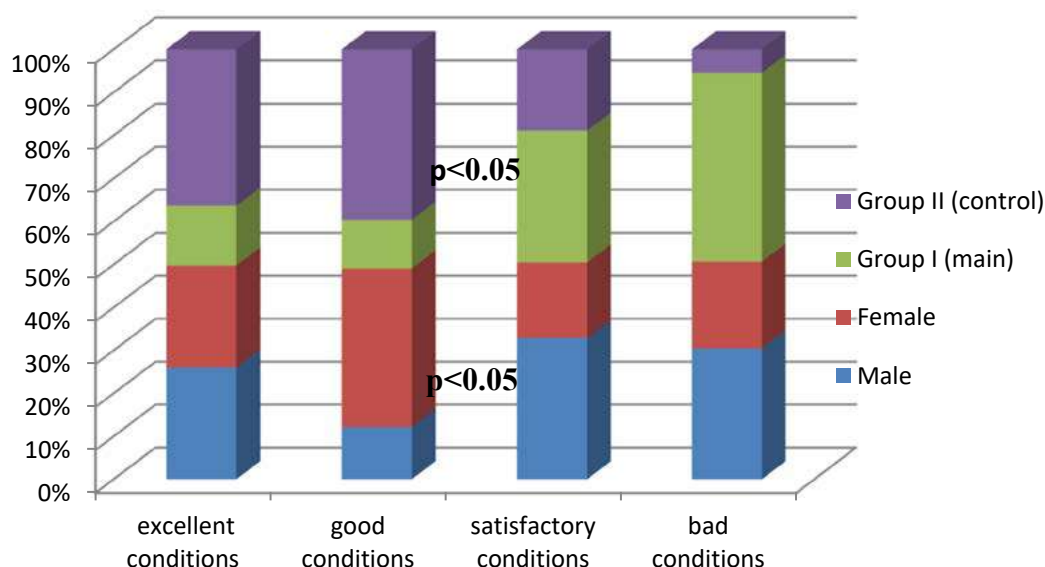


Figure 4. Satisfaction with psychological conditions at work.

It was reliably found that among the respondents of the Group II, there is a significant preponderance of patients with excellent and good working conditions ($p < 0.05$), in contrast to the respondents of the Group I – who, on the contrary, consider their working conditions unsatisfactory. Therefore, a total of 46 people (53.49%) state satisfactory and poor psychological working conditions, which slightly outweigh employees with excellent and good, working conditions (40 people, 46.51%).

Of the psychotraumatic situations, great emotional stress at work, serious financial problems, conflicts in the family, serious illnesses and death of relatives were most often noted. It is worth noting that among the respondents who noted excellent and good material and technical working conditions, the percentage of people with excellent and good psychological conditions prevails (60.47% versus 46.51%).

In women and men, clinical complaints differed somewhat. The vast majority of women often felt fatigued, sleepy, moody, and experienced headaches, as well as muscle and joint pain after finishing work. Compared to men, they reported fatigue and reduced work capacity more frequently.

An important factor influencing the psycho-emotional state is the family environment in which a person lives. Marriage is considered one of the most powerful protective mechanisms of social support for both sick and healthy individuals, whereas widowhood, on the contrary, is an acute life event. It is well known that mortality from cardiovascular diseases among widowed men is significantly higher than among married men.

Satisfaction with relationships with relatives was assessed on a ten-point scale, where 10 indicated a harmonious relationship. The survey results showed

that 94 individuals (78.33%) had harmonious family relationships, while 26 patients (21.67%) reported conflict-ridden relationships. The main causes of conflicts included financial difficulties, misunderstandings with children and/or parents, health conditions, and heavy workloads.

One of the significant risk factors for the development of AH is a person's income level, which, along with health status, is among the most critical factors influencing life satisfaction and confidence in the future. The material condition was assessed based on the subjective perception of financial status: the majority rated it as average – 51 individuals (42.5%), which was significantly higher ($p < 0.05$) compared to those who rated their condition as below average or poor (17 individuals, 14.17%) and very good (5 individuals, 4.16%). Additionally, 47 individuals (39.17%) assessed their financial condition as good, while no participants reported it as very poor.

Financial capabilities also affect access to quality and balanced nutrition, which explains the lower consumption of essential vegetables, fruits, and sea fish.

An important essential aspect is the religiosity of the patient, as it contributes to maintaining a healthy lifestyle regardless of religion. Of the respondents, 109 patients (90.83%) provided a positive response, and 11 (9.17%) responded negatively.

So, the survey showed that as a result of the influence of adverse factors of industrial activity, the examined persons have a pattern of chronic psycho-emotional stress. This explains the higher percentage of socio-cultural risk factors (smoking, alcohol abuse, low income, etc.), which demonstrates insufficient awareness of patients about their disease and preventive measures, which negatively affect the development of the disease. Their expression increases with age and professional activity.

Studying the quality of life of patients as a factor influencing the health and biosocial status of a person is a necessary component that significantly complements the picture of the disease. In the examined individuals, the level of quality of life ranged from very high to very low. The vast majority of patients (50 individuals, 41.67%) reported a high level of quality of life, 44 (36.67%) reported a medium level, 16 (13.33%) a low level, and 5 individuals (4.17%) a very low level. A high level of quality of life was greater ($p < 0.05$) compared to a low level. According to the gender distribution, the majority of women are in the middle level group (42.65%), and the majority of men are in the high-level group of quality of life.

The analysis of the factors that led to a decrease in the level of quality of life, based on the average score of the

criteria, allowed us to draw appropriate conclusions (Fig.5). The patients rated the «health» indicator as the lowest, which was 1.44 and was fully justified. The following three indicators represented the social sphere of a person – «social status» (1.48), «satisfaction with work, activity» (1.59), «social activity» (1.62), which are indicators of dissatisfaction that affects the general quality of life. The following criteria had an average rating: «realization» – 1.70, «financial well-being» – 1.82, «satisfaction with life» – 1.88. A very high and high level of quality of life was mostly noted by patients, taking into account indicators of spending time together in the family, with friends and support of friends. Thus, for the «love» criterion, the highest average score of all criteria was obtained – 2.33, «friends» – 2.28, and «spending time with family» – 1.94.

The average score

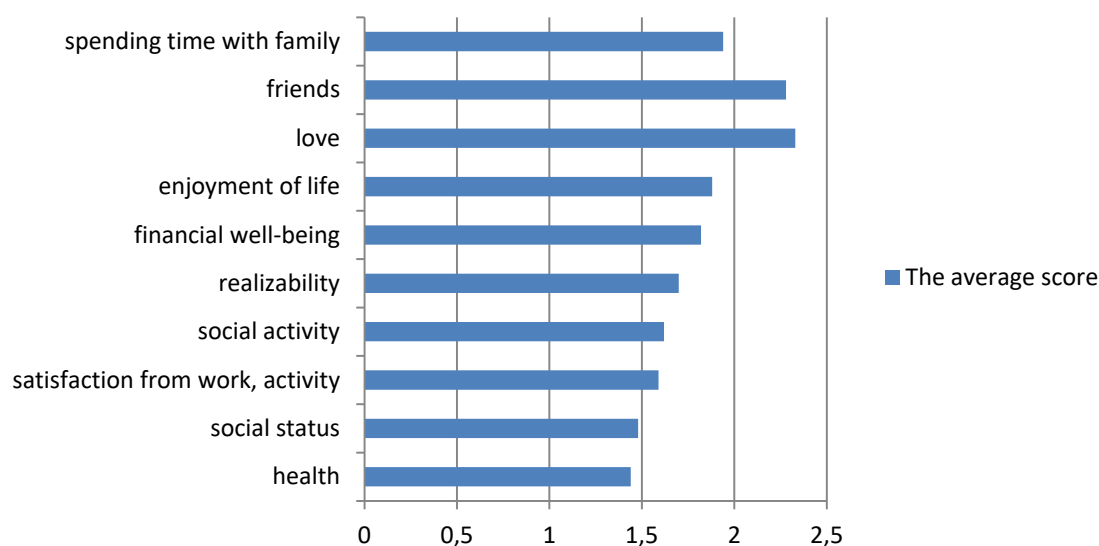


Figure 5. Factors of the level of quality of life.

The study showed a relationship between education, professional activity and quality of life: the higher the level of education, the better quality of life. Patients engaged in professional activities had a better perception of the quality of health compared to retired and unemployed patients.

The obtained data indicate a decrease in the level of quality of life as a result of somatic and social components. It should be noted a proportional decrease in quality of life indicators with increasing age of patients.

It was found that the quality of life of patients with hypertension depends on complications and concomitant diseases. Therefore, their prevention and early treatment are important, which can prevent further deterioration of patients' quality of life.

DISCUSSION

The conducted studies of medical and social factors, quality of life and social factors demonstrate the picture of

the patient's condition as a whole: psychological, social, and spiritual factors are added to the somatic component as prerequisites for the development of pathology, which is decisive in measures of prevention, early diagnosis, treatment and rehabilitation [13].

In recent years, the role of socio-economic factors in the mechanisms of AH, which involve socially determined economic factors, has been increasing in Ukraine [14]. The level of health of citizens, and accordingly the average duration of their quality life, is formed under the influence of such internationally recognized components: natural, socio-economic, socio-political, preventive conditions and medical care [15]. The modern strategy for the prevention and treatment of AH involves taking into account the mechanisms of influence of various risk factors, in particular those caused by lifestyle, including stressful events, chronic stress at work, lack of social support, low socioeconomic status, strained family relationships, etc. In particular, early detection and

correction will significantly improve the cardiovascular prognosis [13]. A. A. Zazdravnov [14] draws attention to the fact that the standard recommendation to limit the use of table salt in the diet of the elderly is much more difficult to implement than in younger patients, due to the weakening of taste sensations with age. Psychosocial factors have a significant impact on blood pressure increase, namely: social (marital status, stress at work and at home, low social support and socioeconomic status – education, profession) and psychological (depression, anxiety disorders and hostility, life exhaustion and sleep disturbances caused by stress factors) [16].

Strenuous and prolonged work, as noted by a number of scientists, is a factor that enables changes in the cardiovascular system, which is initially adaptive in nature, but may later lead to maladaptive processes that contribute to the development of the disease [17].

According to the literature and an assessment of the psycho-emotional state of respondents, individuals living with only one family member tend to report lower life satisfaction. In contrast, those residing in households with three or more family members exhibit a more optimistic outlook [14].

Researchers emphasise the importance of quality of life, as it encompasses not only physical health but also cognitive and behavioural aspects, emotional responses, communication styles, self-perception, and interpersonal relationships. Additionally, it involves an individual's evaluation of life satisfaction in relation to real or anticipated changes caused by the disease [17, 18].

Many researchers emphasise that social factors significantly influence individuals' health status [19]. Our study established that financial difficulties and the necessity for additional work to increase income were perceived as negative factors over the past six months. Moreover, every second patient reported a decline in mutual understanding and worsening interpersonal relationships, while every third noted concerns regarding the threat of unemployment for their relatives and friends.

The analysis of medical and social determinants, quality of life, and broader social factors provides a comprehensive perspective on the patient's overall condition. Psychological, social, and spiritual factors, in addition to somatic components, serve as key determinants in the development of pathology. These elements are crucial for the implementation of preventive measures, early diagnosis, treatment, and rehabilitation [20].

To enhance patients' quality of life, a holistic approach addressing all aspects of functioning is essential. One of the key elements in improving well-being is effective patient education. Such training plays a vital role in managing AH, fostering motivation, promoting positive psychological states, and encouraging behavioural

modifications. It also empowers patients to independently monitor their condition and avoid risk factors that negatively affect their biopsychosocial health. In the pursuit of increasing life expectancy, equal emphasis should be placed on improving daily functioning, alleviating physical and psychological distress, and ensuring active participation in family and social life [21].

CONCLUSIONS

Therefore, AH clearly worsens the quality of life of patients, which leads to a decrease in indicators of both physical and psychological state. The study of psychosocial factors in the life of the respondents revealed a preference for persons with secondary special education (38.33%), excluding men – among whom the majority are persons with higher education (40.38%) and working people (71.62%, $p < 0.05$ vs. 28.33% unemployed), both for men and women, as well as respondents of Groups I and II. It was also established the preference of respondents satisfied with sanitary and technical working conditions among women (55.55%) and respondents of the Group II (47.62%), $p < 0.05$, compared to those who consider such conditions to be bad (4.44% for women and 9.52% for Group II). With regard to psychological working conditions, it was established that excellent and good conditions prevail among women and patients of the Group II ($p < 0.05$), in contrast to men (68.29%) and respondents of the Group I (77.24%), who, on the contrary, rate their working conditions as unsatisfactory. The study of the quality of life of patients revealed fluctuations from very high (41.67%) to extremely low (4.17%), a decrease in the quality of life according to somatic («health» 1.4 points) and social («social status» 1.48, «satisfaction with work, activity» 1.59, «social activity» 1.62) components.

Prospects for further research: further study of the impact of risk factors, psychosocial factors on the development of arterial hypertension, assessment of the quality of life of patients with hypertension will contribute to timely, early diagnosis of hypertension, social support and teaching patients with hypertension a healthy lifestyle, maintaining their own health, preventing future complications, which in turn will improve the quality of life and social adaptation.

FUNDING AND CONFLICT OF INTEREST

This study has not received any external funding. The authors declare that there are no conflicts of interests.

COMPLIANCE WITH ETHICAL REQUIREMENTS

The present study was conducted in accordance with the principles outlined in the Helsinki Declaration and received ethical committee approval. All participants

provided informed consent after being fully informed about the purpose, methods, and potential risks. The confidentiality of participants' data was ensured by anonymizing their personal information. Participants had the right to withdraw from the study at any stage without providing a reason. In the case of research involving minors or individuals with limited legal capacity, informed consent was obtained from their legal representatives.

AUTHOR CONTRIBUTIONS

Mararash H. G.^{A, B}

ChornenkaZh.A.^{A, D, E, F}

Sobko D. I.^{A, C}

Navchuk I. V.^{B, C, E}

Domanchuk T. I.^{A, E}

REFERENCES

- Carey, R.M., & Whelton, P.K. (2018). Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: Synopsis of the 2017 American College of Cardiology/American Heart Association hypertension Guideline for the 2017 ACC/AHA Hypertension Guideline. *Annals of Internal Medicine*, 168(5), 351-358. <https://doi.org/10.7326/M17-3203>
- Koval, S.M., & Snigurska, I.O. (2019). Suchasna stratehiia likuvannia arterial'noi hipertenzii ta profilaktyky yii uskladnen' u svitli novykh Yevropeis'kykh rekomendatsii 2018 roku [A modern strategy for the treatment of arterial hypertension and the prevention of its complications in the light of the new European recommendations of 2018]. *Rational Pharmacotherapy*, 1-2, 11-19.
- Salem, H., Hasan, D.M., & Eameash, A. (2018). Worldwide prevalence of hypertension: a pooled meta-analysis of 1670 studies in 71 countries with 29.5 million participants. *J Am Coll Cardiol*, 71 (11), A1819. [http://dx.doi.org/10.1016/S0735-1097\(18\)32360-X](http://dx.doi.org/10.1016/S0735-1097(18)32360-X)
- World Health Organization. (2013). A global brief on hypertension. Silent killer, global public health crisis. Geneva: WHO. URL: https://iris.who.int/bitstream/handle/10665/79059/WHO_DCO_WHD_2013.2_eng.pdf?sequence=1
- Golovanova, I.A., Lysak, V.P., Zakrutko, L.I., & Khorosh, M.V. (2016). Naukovo-metodychni pidkhody do modernizatsii sposobu zhyttia liudei, scho maiut' faktory ryzyku arterial'noi hipertenzii [Scientific and methodological approaches to the modernization of the lifestyle of people with risk factors for arterial hypertension]. *Kyiv*, 42.
- Mahfoud, F., Mancina, G., Schmieder, R., Narkiewicz, K., Ruilope, L., Schlaich, M., Whitbourn, R., ... & Böhm, M. (2020). Renal Denervation in High-Risk Patients With Hypertension. *J Am Coll Cardiol*, 75(23), 2879-2888. <https://doi.org/10.1016/j.jacc.2020.04.036>
- Kovalenko, V.M., & Kornatskyi, V.M. (2022). Stan zdorov'ia narodu Ukrainy v umovakh viiny [The state of health of the people of Ukraine during the war]. *Kyiv*, 22
- Dyachuk, D.D., Moroz, G.Z., Hydzynska, I. M., & Lasitsya, T.S. (2019). Mul'tymorbidnist' u klinichnii praktytsi [Multimorbidity in Clinical Practice]. *Ukrainian Journal of Cardiology*, 26(1), 94-104. <https://doi.org/10.31928/1608-635X-2019.1.94104>
- Zhavrichenko, K.V. (2019). Faktory ryzyku hipertoničnoi khvoroby [Factors of the risk of hypertensive disease]. *Nursing*, 2, 67-70. <https://doi.org/10.11603/2411-1597.2019.2.10218>
- Russell, J.B., Rahman-Sesay, J., Conteh, V., Conteh, S., Jalloh, A.P., Ibrahim-Sayo, E., & Lisk, D.R. (2020). Prevalence, Awareness and Risk Factors of Hypertension among Health Workers at the Connaught Teaching Hospital, Sierra Leone. *West Afr J Med*, 37(5), 450-459.
- Kovalenko, V.M., & Kornatskyi, V.M. (2016). Problemy zdorov'ia i medychnoi dopomohy ta model' pokraschennia v suchasnykh umovakh [Problems of health and medical care and a model of improvement in modern conditions]. *Kyiv: Gordon*, 261.
- Koval, S.M., Rieznik, L.A., & Starvhenko, T. G. (2023). Osoblyvosti perebihu arterial'noi hipertenzii u khvorykh pislia perebuvannia v zoni boiovykh dii na Kharkivschyni [Characteristics of arterial hypertension in patients after being in a combat zone in the Kharkiv region of Ukraine]. *Ukrainian Therapeutic Journal*, 3, 34-39. <https://doi.org/10.30978/UTJ2023-3-5>
- Kornatskyi, V.M. (2016). Vplyv medyko-sotsial'nykh faktoriv na rozvytok ta perebih khvorob systemy krovoobihu, efektyvnist' yikh likuvannia ta profilaktyky [The influence of medical and social factors on the development and course of diseases of the circulatory system, the effectiveness of their treatment and prevention]. *Ukrainian Journal of Cardiology*, 1, 4-11.
- Zazdravnov, A.A. (2015). Hipertonichna khvoroba u patsientiv pokhlyoho viku: aktsent na sotsial'ni aspekty zakhvoriuvannia [High blood pressure in elderly patients: focus on the social aspects of the disease]. *Family Medicine*, 2, 87-89. [https://doi.org/10.30841/2307-5112.2\(64\).2016.102373](https://doi.org/10.30841/2307-5112.2(64).2016.102373)

15. Grshybowskij, J.L., & Lyubinets, O.V. (2020). Medyko-sotsial'ni determinanty zdorov'ia (ohliad svitovoi literatury) [Medical-social determinants of health (review of the world literature)]. Ukrainian Medical Journal, 2(2), 29-34. <https://doi.org/10.32471/umj.1680-3051.136.175646>
16. Kornatsky, V.M., Mikhal'chuk, V.M., & Dyachenko, L.O. (2017). Vplyv stresu na rozvytok i perebih zakhvoriuvan' [The effects of stress on the development and course of diseases]. World of Medicine and Biology, 1, 194-202.
17. Terenda N.O., & Slobodyan N. O. (2017). Khvoroby systemy krovoobihu ta sotsial'no-ekolohichni faktory ryzyku [Diseases of the system of blood circulation and socio-ecological factors of risk]. Achievements of Clinical and Experimental Medicine, 3, 159-164. <https://doi.org/10.11603/1811-2471.2017.v1.i3.8029>
18. Kornatskyi, V.M., & Moroz, D.M. (2015). Vplyv tryvohy ta depresii na yakist' zhyttia patsientiv iz sertsevo-sudynnoi patologiiu [The effect of anxiety and depression on life quality of patients with cardiovascular disease]. Bukovinian Medical Herald, 19(4), 84-88. <https://doi.org/10.24061/2413-0737.XIX.4.76.2015.218>
19. Younis, J., Jiang, H., Fan, Y., Wang, L., Li, Z., Jebril, M., Ma, M., ... & Hui Z. (2023). Prevalence of overweight, obesity, and associated factors among healthcare workers in the Gaza Strip, Palestine: A cross-sectional study. Front Public Health, 11, 1129797. <https://doi.org/10.3389/fpubh.2023.1129797>
20. Kurtul, S., Ak, F.K., & Turk, M. (2020). The prevalence of hypertension and influencing factors among the employees of a university hospital. Afr Health Sci, 20(4), 1725-1733. <https://doi.org/10.4314/ahs.v20i4.24>
21. Mills, K.T., Bundy, J.D., Kelly, T.N., Reed, J.E., Kearney, P.M., Reynolds, K., Chen, J., & He, J. (2015). Global disparities of hypertension prevalence and control: a systematic analysis of population-based studies from 90 countries. Circulation, 134(6), 441-450. <https://doi.org/10.1161/circulationaha.115.018912>

Резюме**АНАЛІЗ ПСИХОСОЦІАЛЬНИХ ФАКТОРІВ, ЯКІ ВПЛИВАЮТЬ НА ЯКІСТЬ ЖИТТЯ ХВОРИХ НА АРТЕРІАЛЬНУ ГІПЕРТЕНЗІЮ**Галина Г. Марараш¹, Жанетта А. Чорненко¹, Діана І. Собко², Ігор В. Навчук¹, Тетяна І. Доманчук¹¹Кафедра соціальної медицини та організації охорони здоров'я, Буковинський державний медичний університет, м. Чернівці, Україна²Кафедра фізичної реабілітації, ерготерапії та домедичної допомоги Чернівецького національного університету імені Юрія Федьковича, м. Чернівці, Україна

Вступ. Останніми роками в Україні зростає усвідомлення впливу соціально-економічних факторів на розвиток та прогресування артеріальної гіпертензії (АГ). До цих чинників належать соціальні та економічні умови, які суттєво позначаються на стані здоров'я населення, а отже, впливають на середню тривалість і якість життя. За даними Всесвітньої організації охорони здоров'я, близько 1,13 мільярда людей у світі страждають на АГ, причому дві третини з них мешкають у країнах із низьким і середнім рівнем доходу. У 2015 році це захворювання було зафіксоване у кожного четвертого чоловіка та кожної п'ятої жінки в світі. Однак лише 20% пацієнтів ефективно контролюють свій стан. Артеріальна гіпертензія є одним із головних факторів передчасної смертності на глобальному рівні. Дане дослідження присвячене аналізу впливу медико-соціальних і соціально-економічних факторів на загальне самопочуття та якість життя людей із діагнозом АГ. Отримані результати свідчать про негативний вплив АГ на фізичний та психологічний стан пацієнтів, що суттєво знижує рівень їхнього життя.

Мета. Основною метою дослідження є оцінка впливу психосоціальних факторів на якість життя хворих на АГ.

Матеріали та методи. Обстежено 120 пацієнтів віком від 23 до 79 років із встановленим діагнозом АГ. Серед них: Жінки – 56,67%; Чоловіки – 43,33%. Більшість учасників (60,83%) мали АГ першого ступеня, тоді як 24,17% та 15% страждали на АГ другого та третього ступеня відповідно. Для оцінки впливу медико-соціальних факторів на розвиток, прогресування захворювання та якість життя пацієнтів застосовували анкетування та аналіз життєвих умов.

Результати. Дослідження виявило, що: *Освітній рівень:* 71,62% респондентів мають середню спеціальну освіту та є працевлаштованими. *Житлові умови:* 60,47% мешкають у відмінних або добрих санітарно-технічних умовах. *Умови праці:* 39,53% респондентів працюють у несприятливих психологічних умовах. *Фінансовий стан:* 42,5% опитаних мають середній рівень матеріального забезпечення. *Якість життя* серед учасників дослідження варіювалася від дуже високої до надзвичайно низької. АГ мала значний негативний вплив як на фізичне, так і на психологічне благополуччя.

Висновки. Артеріальна гіпертензія суттєво знижує якість життя пацієнтів. Тому важливо забезпечити їм необхідні знання та можливості для контролю факторів ризику серцево-судинних захворювань, що допоможе мінімізувати негативні наслідки АГ.

Ключові слова: артеріальна гіпертензія, медичні фактори, соціально-економічні фактори, якість життя, фактори ризику

Received: 23 October 2024

Accepted: 6 February 2025