Ф А2.2.1-32-367

MINISTRY OF HEALTH OF UKRAINE
NATIONAL UNIVERSITY OF PHARMACY
faculty for foreign citizens' education
department of Organization and Economics of Pharmacy

QUALIFICATION WORK

on the topic: **«IMPLEMENTATION OF INTERVENTIONS FOR THE PREVENTION OF THE STRESS STATES AND SUPPORTING THE MENTAL HEALTH OF PHARMACISTS AND HEALTHCARE WORKERS»**

Prepared by: higher education graduate of group
Фм19 (4,10)eng-04
specialty 226 Pharmacy, Industrial Pharmacy
Pharmacy Educational Program
Ayoub ARHBAL
Supervisor: associate professor of higher education institution of Department of Organization and Economics of Pharmacy, PhD in Economics, associate professor
Nataliia DEMCHENKO
Reviewer: professor of higher education institution Doctor of Pharm. Sc., Head of the Department of Pharmaceutical Technology, Standardization and Certification of MedicinesProfessor Rita SAGAYDAK-NIKITYUK

Kharkiv - 2024 year

ANNOTATION

The work is presented on 62 pages, consists of an introduction, three sections, general conclusions, illustrated with 16 figures, and contains 39 sources of scientific literatur.

The paper studies the stress states of medical and pharmaceutical workers in different countries, on the example of Germany and Morocco, and proposes a strategy for overcoming stress states based on the profile of the coping strategy of individuals of professional groups.

The object of the study is specialists with higher medical and pharmaceutical education working in clinics.

The subject of research: occupational stress and emotional burnout in medical and pharmaceutical workers.

Keywords*: stressful states, professional burnout, mental health, medical and pharmaceutical workers, emotional support programs*

АНОТАЦІЯ

Робота викладена на 62 сторінках, складається зі вступу, трьох розділів, загальних висновків, списку використаних джерел та додатків. Робота ілюстрована 16 рисунками, містить 39 джерел наукової літератури.

У роботі досліджено стресові стани медичних і фармацевтичних працівників різних країн на прикладі Німеччини та Марокко та запропоновано стратегію подолання стресових станів на основі профілю копінг-стратегії індивідів професійних груп.

Об ' єкт дослідження - фахівці з вищою медичною та фармацевтичною освітою, які працюють у клініках.

Предмет дослідження: професійний стрес та емоційне вигорання у медичних і фармацевтичних працівників.

Ключові слова*: стресові стани, професійне вигорання, психічне здоров'я, медичні та фармацевтичні працівники, програми емоційної підтримки*

CONTENT

INTRODUCTION

Actuality. The relevance of the problem of overcoming stress in healthcare professionals is due to the realities of modern society, the changing processes that have been taking place in the industry recently and in society as a whole. In communicative professions, where the work involves constant contact with people and excessive emotional intensity, working conditions often cause the formation of such a complex and multifaceted phenomenon as emotional burnout syndrome One of the most prominent professions with a high risk of stress and mental well-being disorders is the profession of a medical and pharmaceutical worker. There are increased requirements for the doctor's personality - gaining new experience throughout life, a high level of responsibility, determination, empathy, integrity, and emotional stability are essential professional qualities of healthcare professionals. In the course of professional activity, the opposite is often the case: fatigue, anxiety, depression due to diagnostic errors, tension, and stressful conditions. Their consequences are dangerous not only for healthcare professionals but also for the objects of their professional activity - patients, people in need of special care, increased attention, emotional support. A professionally exhausted, emotionally exhausted doctor or nurse is unable to work productively, as their psychological readiness for innovative activities, and personal and professional self-improvement decreases, and their relationships with the administration, colleagues, and clients deteriorate.

Purpose: is to identify the peculiarities of occupational stress in healthcare workers and to determine methods of its prevention during their professional activities.

According to the purpose of the qualification work, the following ***tasks*** are established:

- theoretical and methodological analysis of the problem of stressful conditions and professional emotional burnout in medical and pharmaceutical workers;

- to investigate the factors influencing the occurrence of stress in healthcare and pharmaceutical workers in different countries of the world (on the example of Germany and Morocco);

- to identify significant signs of stressful conditions and and emotional burnout, the nature of their manifestation in health care workers in different professional groups and depending on the length of service;

- to analyze and compare the stages of professional burnout in employees of different ages, status, and impact on professional activity;

- to investigate the peculiarities of stress coping and coping strategies of the individual in different professional groups of health care workers;

- to identify ways to manage occupational stress and develop a program to overcome occupational stress in medical and pharmaceutical workers.

The object of the study is specialists with higher medical and pharmaceutical education working in clinics.

Subject of research: occupational stress and emotional burnout in medical and pharmaceutical workers.

In the course of the study, the following ***methods*** were used during the qualification work: analysis and synthesis of literary data covering the issue of professional burnout; analysis and synthesis of national institutions; psychodiagnostic studies according to the questionnaires, analysis of statistical reports; sample conversations, observation of objects, statistical, graphic.

Approbation of the results of the study and publication: according to the research, a scientific article was published in the collection of scientific studies "Integration of quality, leadership and efficiency in in healthcare and pharmacy management" and "Practical aspects of management and marketing in pharmacy".***The practical significance of the results obtained.*** The research helped to analyze the factors influencing the mental well-being of healthcare professionals. An effective program aimed at overcoming psychological stress in the performance of official duties and minimizing physiological and psychological effects on the individual has been developed.

The structure and scope of the qualification work: introduction, experimental part, conclusion, list of references, Appendixes.

UNIT 1
THEORETICAL BASIS FOR THE ANALYSIS OF STRESSFUL CONDITIONS AND EMOTIONAL BURNOUT IN MEDICAL AND PHARMACEUTICAL WORKERS

1.1. The essence of the concept of mental health and stress, their signs

In modern society, a significant number of socio-economic changes are taking place that affect the way a person performs his or her professional activities and attitude towards it.

Any profession has its own difficult aspects, and complexes of psycho-traumatic factors that affect people's lives. Particularly severe negative personality damage is inherent in the number of professions in the "person-to-person" system. The profession of a medical worker is no exception.

The World Health Organisation (WHO) defines mental health as “a state of mental well-being in which people cope well with the many stresses of life, can realize their own potential, can function productively and fruitfully, and are able to contribute to their communities”. Optimal mental health involves the absence of mental illness and a high level of mental well-being. Existing research has focused more on mental illness rather than on mental wellbeing. Our understanding on mental illness and mental health lags far behind our understanding of physical health, particularly given the lack of definitive biological markers and diagnostic challenges. Mental illness is often associated with stigma, a critical barrier in itself determining health-seeking behavior and, ultimately, access to care. Mental health is influenced by risk and protective factors both within and around the individual. Furthermore, the complex interplay of determinants, both occupation-specific and generic, necessitates a comprehensive framework with an array of interventions, across sectors, settings and levels. These should act synergistically to tackle the wide and diverse range of risk factors whilst enhancing the effect of protective factors, ensuring no one is left behind.

Occupational deformity develops gradually from professional adaptation, which is necessary for a healthcare worker. Adaptation to new, and even more so to extreme conditions, is achieved at the cost of expenditure of the body's functional reserves at the expense of the so-called social payment. The body's reaction to external and internal influences depends on the strength of the factor, the time of its action, and the employee's adaptive potential.

Due to the high emotional intensity of a medical professional, non-standard work situations, responsibility, and complexity, the risk of developing stressful conditions has increased significantly, especially in the last 2-3 years, when many countries around the world have felt the impact of the Covid-19 waves, it should be noted that medical professionals are at the highest risk.

Extreme situations are often accompanied by stress when a healthcare worker has an acute internal conflict between the strict requirements imposed by his or her responsibility and the objective inability to fulfill them. Stress as a state of mental tension caused by difficulties and dangers generally mobilizes a person to overcome them. However, if stress exceeds a critical level, it turns into distress, which reduces work performance and undermines human health. There are professional stresses, personal stresses, responsibility stresses, social stresses, etc.

It should be noted that there is a fairly high incidence of depressive disorders among doctors, and about a third of healthcare workers regularly use medications to correct emotional stress and anxiety. According to the results of the assessment of personal anxiety, healthcare workers were found to have mostly medium (58%) and high (38%) levels of personal anxiety. Pediatricians (86%) and family doctors (89%) had the highest levels of personal anxiety, while ambulance workers and surgeons had mostly average levels of personal anxiety. The analysis of the results of identifying the level of professional burnout in health care workers of different specialties allowed us to establish certain features depending on the level of work intensity and specialization of doctors [22].

Physicians prone to developing emotional burnout syndrome are emotionally cold or emotionally labile, unable to clearly, coherently and evenly distribute their working time and professional activities, which immediately affects the emotional state and subsequently the physical state of their patients, and in general, the outcome of treatment and solving patients' problems. In the early stages of development, emotional burnout syndrome is manifested by a feeling of indifference to patients, increased fatigue, deterioration of professional qualities, attention and memory, negative attitude towards colleagues and patients, and self-doubt. In the future, a doctor may become alienated, rigid in thinking, avoid colleagues and patients, physically and spiritually distancing himself or herself from them.

The term "stress" was coined by the American physiologist Walter Cannon in 1932. The term became more widely used thanks to the Canadian endocrinologist Hans Selye [41], who explained the basic mechanisms of adaptation of the body. [41] In turn, T. Cox (1981), considering this approach to the concept of stress, considers it close to the physiological model of stress. A common drawback of Selye's theory is the underestimation of psychological factors in the development of stressful conditions, arguing that the physiological response is mainly determined not by the presence of stress, but by its psychological impact on the individual. Cox goes on to present stress concepts in terms of a model based on stimuli that are considered somewhat disturbing or disruptive, and finally, a model based on interaction. Another approach is based on the assertion that stress arises from the existing special relationship between a person and his or her environment. None of these approaches, in the author's opinion, provides a proper interpretation of the physiological mechanisms of stress [14].

Загалом вирізняють два види стресів:

- Eustress: positive stress, which stimulates cognitive processes and processes of self-knowledge, comprehension of reality, and activates memory.

- distress: negative stress.

Both men and women are prone to stress, but each organism has its own characteristics. If a person notices his or her own signs of stress, it is necessary to

immediately identify its causes in order to simplify the fight against stress There are external causes of stress, for example: change of job, illness, climatic conditions. There are also internal causes of stress, such as life values and beliefs, and self-esteem.

Stress is not a factor that resides in a person or in the environment, but is instead embedded in an ongoing process that involves people interacting with their social and cultural environment (fig.1.1)

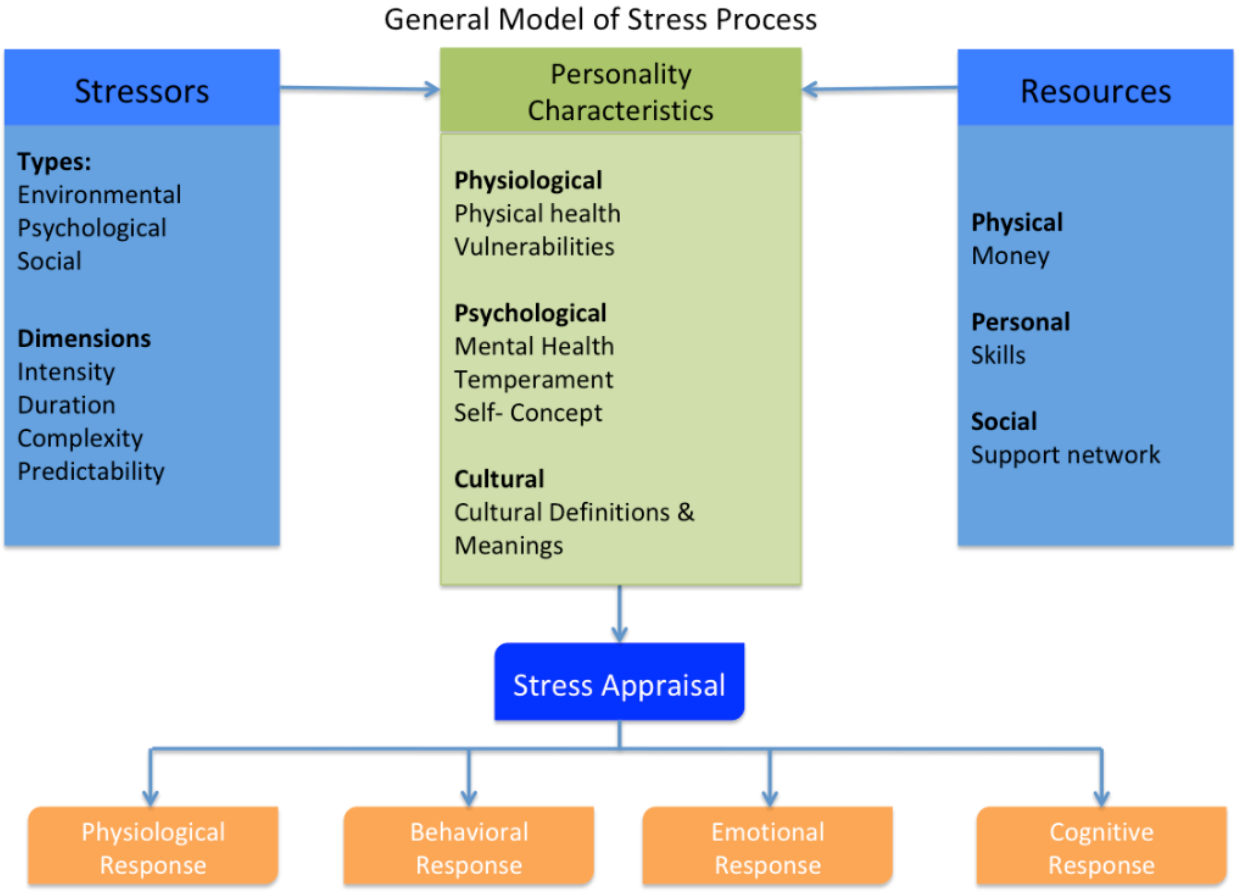

Fig.1.1. General model of the stress process

Stress is defined as a psychological state of a person during which there is a strong mental and physical activity. This state is a reaction of the body caused by external and internal stimuli, both negative and positive. External stimuli can include overstrain, negative emotions, monotonous bustle, excessive joy. [2] Psychologists have established the usefulness of experiencing stress in small doses

by each person, because it stimulates the search for a way out of the problem, thinking that life without stress would not be interesting.

With the help of stress, the human body is saturated with new beneficial phenomena that are necessary for the struggle for existence. For example, the stress response produces antibodies to fight infection. [19] However, otherwise, if a person lives under the yoke of stress all the time, he or she will experience a decrease in productivity, exhaustion, loss of strength, and the ability to solve problems.

There are all kinds of factors that can cause stress. They range from physical illness to financial problems, to change of work, to strained relations, to loss of a dear one, to social situations. All these stressors can be listed under:

1) Emotional stressors
2) Family stressors
3) Social stressors
4) Change stressors
5) Chemical stressors
6) Work stressors
7) Decision stressors
8) Commuting stressors
9) Phobia stressors
10) Physical stressors
11) Disease stressors
12) Pain stressors
13) Environmental stressors

Stress affects every system in the body, including the musculoskeletal, respiratory, cardiovascular, endocrine, gastrointestinal, nervous, and reproductive systems A new study from Harvard Medical School suggests that increased activity in the amygdala, the area of the brain that processes emotions such as fear and and anger.

The effect of constant stress on a specific area deep in the brain leads to an increased risk of developing cardiovascular disease, which affects the heart and

blood vessels. When the body is under stress, muscles become tense. Muscle tension is almost a reactive response to stress - protecting yourself from injury and pain. When under sudden stress, muscles tense for a moment and then relax when the stress passes. Chronic stress causes the muscles in the body to be in a somewhat similar state. When muscles are tense for a long time, it can cause other reactions in the body and even stress-related disorders. For example, headaches and migraines are associated with constant spasms in the muscles of the shoulders, neck, and head (Annex A). Stress and anxiety are accompanied by respiratory symptoms, such as shortness of breath and rapid breathing, because the airway between the nose and lungs is narrowed. For people without breathing problems, this is usually not a problem because the body can do more work to breathe comfortably, but psychological stress can cause breathing problems in people with breathing problems such as pulmonary and chronic obstructive pulmonary disease (including emphysema and chronic bronchitis).

The perception of stress is dependent upon the individual's cognitive appraisal of events and the resources available to deal with them. An individual's response to a stressful situation largely depends upon the perceived events and how they are interpreted or appraised. Lazarus has distinguished between two types of appraisal, i.e. primary and secondary.

Primary Appraisal refers to the perception of a new or changing environment as positive, neutral or negative in its consequences.

Secondary Appraisal. When one perceives an event as stressful, they are likely to make a secondary appraisal, which is the assessment of one's coping abilities and resources and whether they will be sufficient to meet the harm, threat or challenge of the event. These resources may be mental, physical, personal or social. If one thinks one has a positive attitude, health, skills and social support to deal with the crises s/he will feel less stressed.

1.2 Features and stages of stress

There are three stages in the development of stress (Fig. 1.2) [5].

1. Alarm stage. Anxiety is the primary stage that appears with the appearance of a stressor. The presence of this stimulus provokes several physiological changes: breathing becomes rapid, blood pressure rises, and heart rate increases. Mental functions also change: focusing attention on the stimulus, and excessive personal control of the situation. Taken together, this is aimed at rallying the body's defenses and self-regulatory mechanisms to defend against stress. If this action is sufficient, anxiety and excitement are suppressed, and stress disappears. Most stress is overcome at this stage.

2. The resistance stage occurs when the stressor continues to act. Then the body defends itself against stress by attracting "reserve" forces, generating optimal load on all body systems.

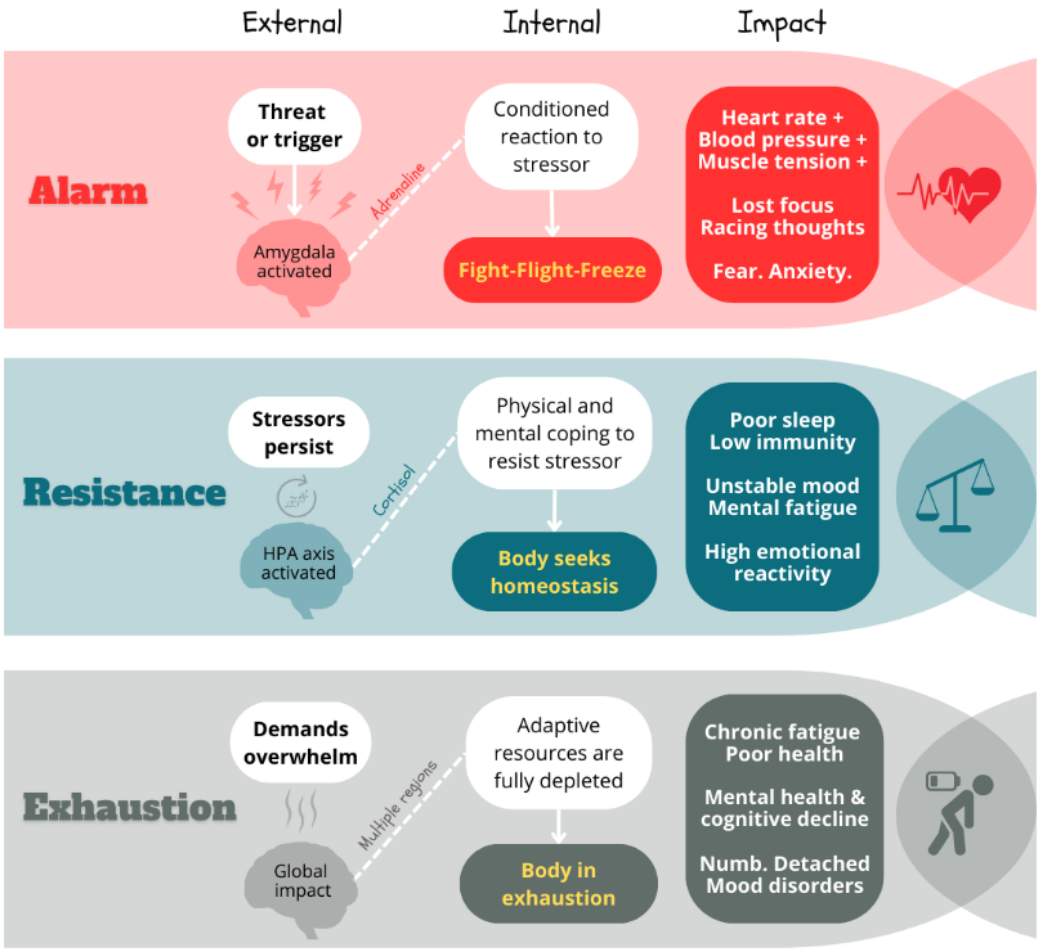

Fig.1.2. Three stages of stress

3. The stage of exhaustion. In case of prolonged exposure to the stimulus, the ability to withstand stress decreases, as human reserves are depleted. The total resistance of the body decreases. Stress "captures" a person and can lead to illness. Under the influence of an irritating factor, a person evaluates the situation as threatening. The degree of threat is different for everyone, but under any circumstances it causes negative emotions. Awareness of the threat and the presence of negative emotions encourage a person to overcome harmful factors: he or she makes efforts to fight the factor that threatens to destroy him or her or to "get away" from it. For this purpose, the individual spares no effort. If the situation is not resolved, and the strength to fight is exhausted, neuroses and a number of irreversible, negative changes in the human body are possible. Since in similar situations, some people see a threat of varying degrees, while others, under the same conditions, do not see it at all, the stress and its degree differ for each person. Stress can be acute or chronic. There was an opinion that extreme situations can provoke stress. In this case, we are dealing with acute stress.

Through the process of adaptation, homeostasis is maintained in the body's interaction with the outside world.

Mental adaptation is a continuous process, which, along with mental adaptation itself, includes two more aspects [5]:

1. optimization of the individual's constant interaction with the environment;

2. establishing an adequate correspondence between mental and physiological characteristics.

Anxiety, despite the large number of different semantic formulations, is a single phenomenon and serves as a mechanism of emotional stress. In the event of any imbalance in the human environment, it activates adaptation mechanisms, and at the same time, at high intensity, it reaches the root of the development of adaptive disorders. An increase in anxiety leads to the activation or intensification of internal mental adaptation mechanisms. These mechanisms can contribute to effective mental adaptation by reducing anxiety, and if they are inadequate, they affect the types of adaptive disorders that correspond to the nature of the borderline

psychopathological phenomena that arise. The organization of emotional stress involves difficulties with the realization of motivation, blocking of motivated behavior, i.e. frustration. The combination of frustration, anxiety and their interconnection with allopsychic and internal mental adaptations constitutes the main body of stress. The effectiveness of mental adaptation directly depends on the organization of microsocial interaction.

1.3. Manifestations of emotional burnout syndrome in healthcare workers

Найбільш поширеним є поділ чинників емоційного вигорання на два блоки: зовнішні чинники, що характеризують особливості професійної діяльності, та внутрішні чинники (рис.1.3).

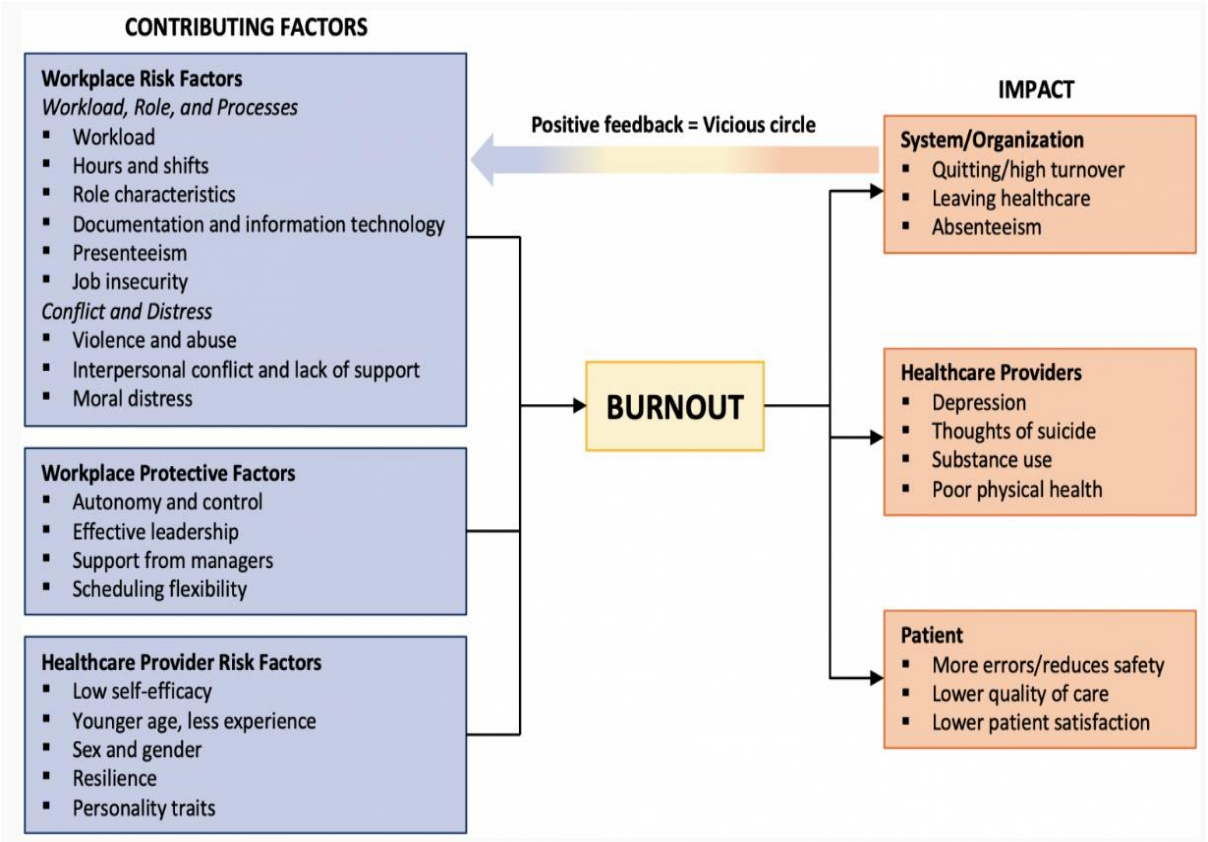

Fig.1.3. Stressful conditions factors leading to burnout

Among the external factors, the following are the most significant:

1. Chronically strenuous psycho-emotional activity associated with intensive communication, or rather, with purposeful perception of partners and action on them. Healthcare professionals have to constantly reinforce various aspects of communication with emotions: actively raise and solve problems, carefully perceive information, intensively memorize and quickly interpret (analyze) verbal, non-verbal and written information, quickly and sometimes instantly weigh alternatives and make decisions (sometimes a doctor has a few seconds to do this).

2. Destabilizing organization of activities: unclear organization and planning of work, lack of equipment, poorly structured and vague information, presence of "bureaucratic noise" - small details, contradictions, overestimated norms of the contingent with which professional activities are associated.

3. Increased responsibility for the functions performed by healthcare professionals. They constantly have to take on the energy discharges of managers, patients, their relatives, dissatisfied visitors, and irritated colleagues. Everyone who works with people and is honest about their duties is ethically and legally responsible for the moral well-being of their communication partners.

4. The unfavorable psychological atmosphere of professional activity is determined by two main circumstances: vertical conflict in the system of "supervisor-subordinate" and horizontal conflict in the system of "colleague-colleague".

5. The psychologically difficult contingent that a healthcare professional in the field of communication deals with, and even more so for psychiatric or drug treatment professionals, are patients with abnormal mental disorders, leveled positive character traits, nervous system disorders, agitated, sometimes dangerous to themselves and others, autistic or with mental retardation, etc.

The internal factors of emotional burnout include the following: a tendency to emotional rigidity; intense perception and experience of the circumstances of activity; weak motivation for emotional return in activity; moral defects and disorientation of the individual [27].

The studied relationships between emotional burnout and life orientations and emotional orientation of mental health professionals confirm that many factors are important in the development of EBP: from stress resistance and individual personality traits to socio-political decisions that affect not only the future of the country or region, but also everyday life.

Psycho-emotional burnout is mostly caused by chronic stress, emotional overwork, and sociopathic stressors.

Emotional burnout syndrome among healthcare professionals as a result of prolonged stress. Burnout syndrome is physical, emotional or motivational exhaustion. This syndrome is qualified as a stress response to occupational and emotional demands that originate from a person's excessive devotion to his or her work, with a resulting disregard for family, family values, and leisure. A constant or progressive deterioration of the balance steadily leads to "professional burnout". "Burnout is not only a result of stress, but also a consequence of unmanageable stress. This condition appears as a result of the internal concentration of negative emotions without a kind of "discharge" or "release" from them.

In general, this is distress or the last stage of the general adaptation syndrome - the stage of exhaustion. Among the symptoms that appear first are a general feeling of fatigue, a hostile attitude to work, and a general vague sense of anxiety. Such work is perceived as constantly complicated and lacking in effectiveness. The person is prone to easily triggered irritability, feelings of exhaustion, and a pessimistic outlook on the events around them. Burnout syndrome is characterized by distinct symptoms.

Psychophysical symptoms:

-feeling of persistent fatigue not only in the morning but also in the evening;

- feeling of emotional and physical exhaustion;

- decreased sensitivity and reactivity due to changes in the environment;

- generalized asenization (weakness, decreased activity and energy, deterioration of blood chemistry and hormonal parameters);

- frequent headaches without organic causes, problems with the gastrointestinal tract;

- sudden weight loss or sudden weight gain;

- constant or periodic insomnia;

- constant lethargy and drowsiness throughout the day;

- shortness of breath or difficulty breathing during physical or emotional stress;

- a noticeable decrease in external and internal sensory sensitivity: impaired vision, hearing, smell and touch, etc.

Social and psychological symptoms:

- apathy, melancholy, passivity and depression;

- excessive irritability to minimal factors;

- nervous breakdowns not justified by the situation (outbursts of unmotivated anger or refusal to communicate);

- frequent experiences of negative emotions for no apparent reason;

- a feeling of unconscious anxiety and increased anxiety;

- a sense of excessive responsibility and a constant feeling of fear;

- a pessimistic attitude towards life and professional achievements in the future.

Behavioral symptoms:

- a feeling that the work is becoming more complex and that it is becoming more difficult to perform it; - the employee independently changes his/her working hours (increases or decreases the hours of work);

- often and without justified reasons, the employee constantly takes work home, but does not do it at home;

- it is difficult for the manager to make decisions; a sense of futility, a feeling that things will "go uphill", a decrease in motivation in relation to work, indifference to its results;

- Failure to fulfill the most important, main areas of work and "getting stuck" on small tasks;

- distancing from colleagues and clients, the rise of inadequate criticality;
- alcohol abuse, a sharp increase in cigarettes smoked per day, and drug use.

Emotional exhaustion is regarded by psychologists as the main component of "professional burnout" and is characterized by reduced emotional coloration, indifference, or emotional overload. Depersonalization can be seen in the deformation of relationships with other people. In some cases, this may be an increase in dependence, and in others, a surge in negativism, cynicism, and feelings about other people. Reduction of personal achievements is reflected either in a tendency to negatively assess one's personality, professional achievements and successes, negativism about one's job dignity and opportunities, or in devaluation of personal dignity, narrowing of one's capabilities, responsibilities towards others, etc.

According to the WHO (2001), "burnout syndrome is a physical, emotional, or motivational exhaustion characterized by impaired work performance and fatigue, insomnia, increased susceptibility to somatic diseases, and the use of alcohol or other psychoactive substances to obtain temporary relief, which tends to lead to physiological dependence (in many cases) and suicidal behavior. [2]

The syndrome is usually viewed as a stress response to the challenge of tough production and emotional demands arising from a person's excessive dedication to his or her profession with a resulting disregard for family values or leisure.

The problem is that doctors usually do not always notice this in time. Therefore, it is extremely important to identify psychodiagnostic techniques for assessing the level of emotional burnout. It is necessary to clearly define the psychological characteristics, structural components, and functional mechanisms of burnout and their relation to the main individual psychological characteristics of healthcare workers. This will allow a person to pay attention to the depth of emotional burnout promptly and focus internal resources, as well as apply preventive techniques, study themselves professionally, balanced and personally, and make progress in development. If a healthcare professional has been practicing for a long time without feeling personal harmony with medicine, i.e. without seeing its inner significance, without being able to give it their all, then internal devastation

inevitably occurs, because there is no dialogic exchange where a person not only gives but also receives. Ultimately, the pathology takes on the character of depression.

Conclusions to the Unit 1

The theoretical and methodological aspects of the mental well-being of medical and pharmaceutical workers, the peculiarities of the occurrence of stressful conditions and professional burnout associated with labor activity are investigated.

The features of professional activity in health care that cause the emergence of stressful conditions are determined: high responsibility, unusual situations, emotional stress, the danger of difficult experiences associated with the recovery of patients, prolonged exposure to negative emotions - suffering, pain, despair, irritation. The consequences of prolonged stress in health care workers are emotional burnout, physical exhaustion, overwork.

It has been established that burnout is a complex of mental experiences and behaviors that affect the employee's performance, physical and mental well-being, as well as personal relationships. Having summarized many definitions of "burnout" and analyzed the data, we identified three main components: emotional and/or physical exhaustion, depersonalization, and reduced work productivity.

UNIT 2
INVESTIGATION OF MENTAL HEALTH AND STRESS CONDITIONS IN MEDICAL AND PHARMACY WORKERS IN MOROCCO AND GERMANY

2.1. Investigation of the specific factors influencing mental health and stress of the health workforce

The imbalance of the human environment, the lack of mental or physical resources of the individual to meet current needs becomes a source of anxiety. General overview of mental health can be envisaged as a two-dimensional concept (Fig.2.1).

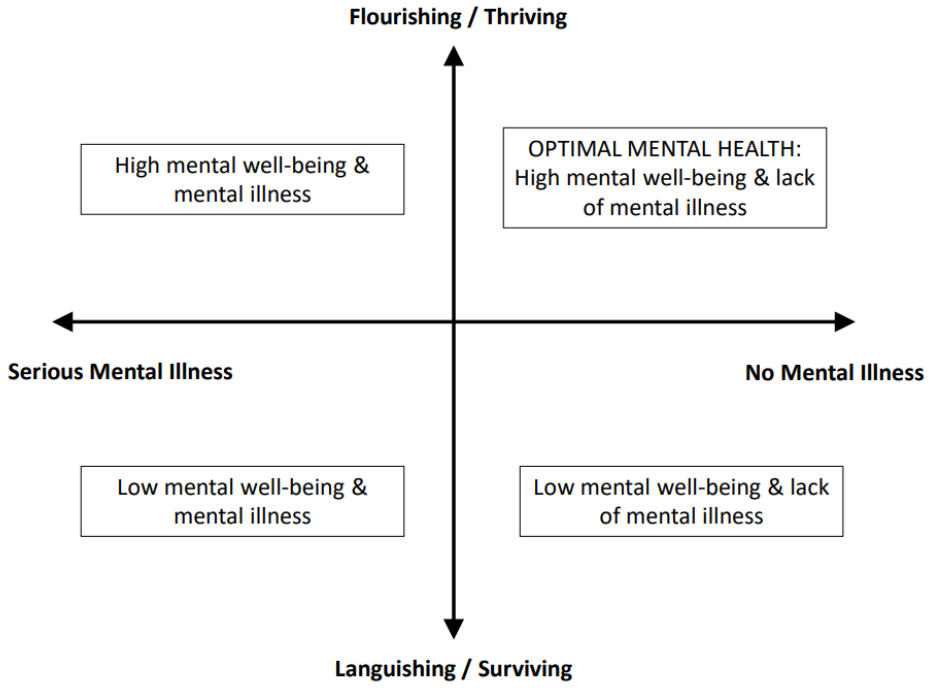

Fig. 2.1. The two dimensions of mental health

On one dimension lies a continuum, that could be described as pathogenic or illness-focused, from no mental illness to serious mental illness. On another, and arguably, a more important dimension is salutogenic, or health-focused, comprising a spectrum of ability to function. This salutogenic approach is aligned with the World Health Organization's definition of mental health as "a state of mental well-

being in which people cope well with the many stresses of life, can realize their potential, can function productively and fruitfully, and can contribute to their communities. Some authors refer to this as the continuum between flourishing/thriving and languishing/surviving. In Figure 1, optimal mental health is present at the area with high mental well-being and lack of mental illness. The "whole health approach" to supporting the mental health of essential workers requires addressing both mental illness services and mental health promotion and protection.

Less than optimal mental health occurs when a person shows signs or symptoms of mental illness and/or low mental well-being affecting their everyday function. If this is well managed, he/she may be able to restore his/her mental health to optimal levels. However, if not effectively managed, they may lead to sub-optimal mental health leaving the individual concerned unable to function day-to-day.

The signs and symptoms of mental health are many and complex. Common mental illnesses include depression (sadness and loss of interest in previously enjoyable activities, possible suicidal ideation), anxiety disorders (excessive, debilitating worrying), and post-traumatic stress disorder (long-term symptoms in response to a traumatic event, including re-experiencing the event via nightmares and/or intrusive memories). At the risk of generalization, research tends to focus more on the mental illness dimension of mental health than the mental well-being dimension. Our understanding of mental illness and mental health often lags far behind our understanding of physical health. Identifying and treating mental health disorders is more complex than treating bodily illness or injury. Many mental illnesses lack definitive biological markers and signs/symptoms can be interpreted in different ways. Mental illness symptoms may manifest as cognitive, emotional, behavioural, and/or physical (or bodily/somatic) phenomena. This makes it challenging to rule out alternative diagnoses although there are now many assessment tools, typically based on questionnaires, designed to use with mental wellbeing and mental health/illness. As with a physical illness, diagnosis depends on someone seeking help and overcoming the many barriers that exist in doing so.

However, there are additional problems when someone has mental health problems because they may not recognize them or they may fear the stigma that is often associated with them. Risk factors increase vulnerability to experiencing adverse mental health, whereas protective factors do the opposite. They can assist recovery after exposure to stress (harm-reduction approach), protect against adverse mental health before stress (protection approach), and/or promote positive aspects of mental health (promotion approach).

Thus, the mental health of a person at a given point is influenced by a combination of prior and current experiences, risk factors, and protective factors.

The most relevant are the health and social/community care sectors; the workplace (such as occupational health programmes and managerial-level changes), and within the wider economic and social policy arena (Fig. 2.2).

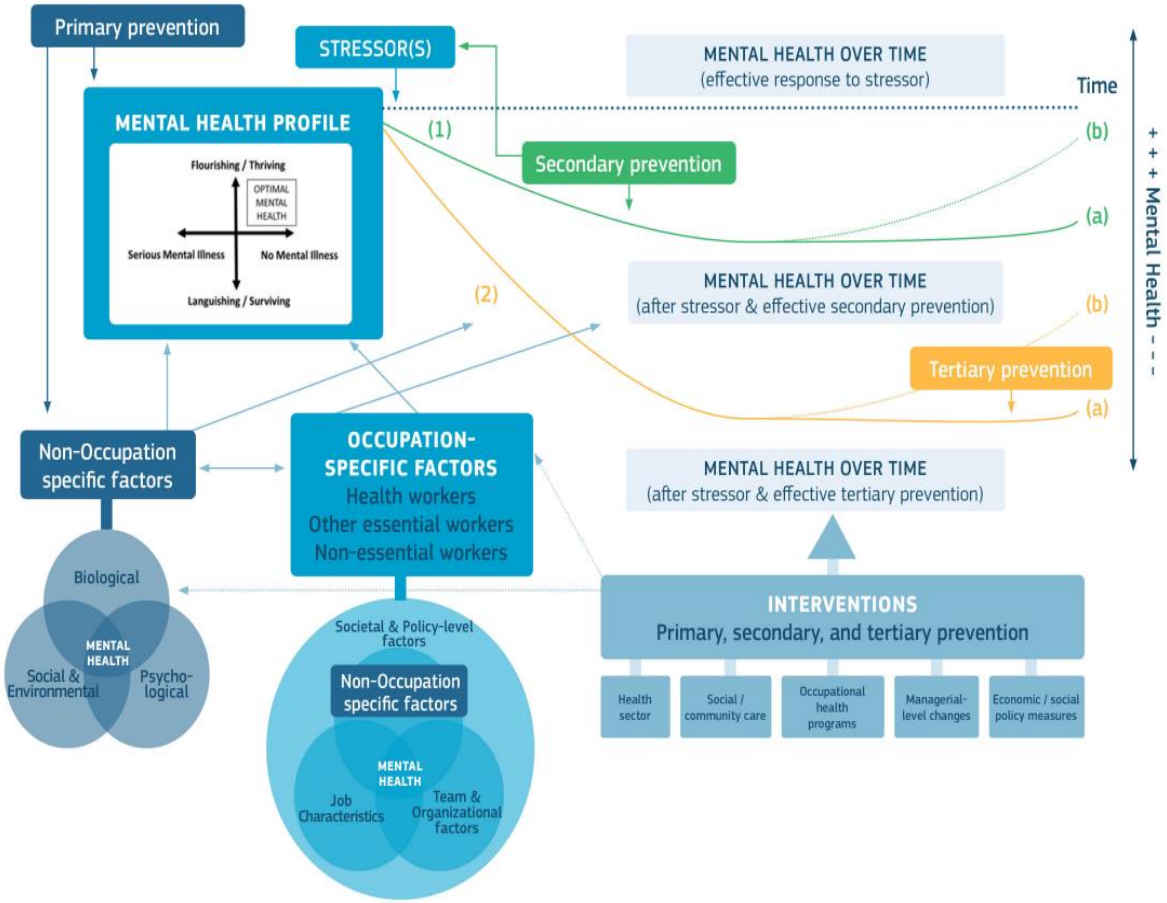

Fig.2.2 Conceptual framework for supporting the mental health of the health workforce and other essential workers

The focus of Fig.2.2 is the individual's mental health profile at a given point in time, represented by the two-dimensional grid of mental illness and mental wewell-beingresented earlier. Risk and protective factors interact to influence this profile. Given the focus of this Opinion, we consider non-occupation-specific (e.g., biological, ssocioenvironmental and psychological), which then interact with occupation-specific factors such as characteristics of jobs, teams, and organizations, all within a broader health and social care and policy context. These individually and collectively influence the mental health trajectory of the individual concerned.

Figure 2 includes a simplified Venn diagram to show three non-occupation-specific factor groupings – biological factors, social and environmental factors, and psychological factors. Vulnerabilities might include genetic predisposition to mental illness, lack of social or familial support, economic difficulties, and/or psychological traits such as strategies to cope with stress or cognitive tendencies like optimism vs. pessimism.

However, the ability to cope can change over time. We can expect a worsening of mental health if (i) the stressor is very traumatic and/or prolonged over time and/or there is an accumulation of multiple stressors and (ii) the person is especially susceptible to the stressor(s) at that time due to the complex interplay of factors that determine mental health and individual thresholds. The extent of deterioration will depend on the initial mental health profile and the interaction of occupation non-occupation-specific risk and protective factors.

This is represented by trajectories 1 and 2, with trajectory 1 involving less severe deterioration than trajectory 2. In each case, recovery may occur spontaneously, depending on the initial mental health profile and the combination of risk and protective factors. There may be a variety of interventions that can influence modifiable risk/protective factors and/or mitigate the effects of the stressor (primary prevention), while others might mitigate the impact of the stressor on mental health and/or promote rapid recovery from the stressor (secondary prevention), and/or decrease the rate of deteriorating mental health (tertiary prevention).

In each of these trajectories, there are two further pathways, a and b. In scenario 2a, the mental health of the individual continuously deteriorates over time without effective secondary prevention but remains stable at a low level with effective tertiary prevention. Scenario 1a, compared to scenario 2a, illustrates how secondary prevention reduces the extent of mental health deterioration caused by the stressor. In both b scenarios, mental health eventually recovers, returning to baseline in scenario 1b but not in scenario 2b. Thus, besides influencing the initial level of deterioration caused by the stressor, secondary prevention can prompt a faster recovery, an earlier recovery, and/or a more complete recovery and return to baseline mental health.

Although less well recognized, they have also faced risks to their mental health.1 The list of those at risk is long. They include healthcare personnel, long term care workers, teachers, cleaners, cooks, emergency personnel (police, fire department, civil protection), people working in transport, agriculture and food production, critical retail facilities (grocery stores, hardware stores), critical trades (construction workers, electricians, plumbers etc.), water and wastewater workers, energy and distribution, those delivering social services, and others that manage critical infrastructure and services.

Risk factors for psychological distress included being younger, being more junior, being the parents of dependent children, or having an infected family member. Longer quarantine, lack of practical support, and stigma also contributed to psychological distress. Protective factors for mental health including clear communication, access to adequate PPE, adequate rest, and both practical and psychological support were associated. Annex A provides a summary of these risk and protective factors.

Additional occupational health and economic risk factors influencing the mental health of essential workers, in general, An umbrella review on work-related stress risk and preventive measures identified the following groups of occupational risk factors that influence mental health and deserve attention when considering actions to support the mental health of essential workers:

- Role: Conflicts, violence, responsibility, role ambiguity, sense of powerlessness

- Relationships: Colleagues' support, senior's support, subordinates (e.g. nurses), communication, bullying

- Control: Limited control over the practice, dissatisfaction, lack of autonomy

- Factors intrinsic to the job: Workloads, shift work (night shifts in particular), work time, medical errors, medico-legal concerns

- Organizational environment: Participation in decision-making, inadequate leisure time, excessive bureaucracy, absenteeism, reward system

- Career: Job security, career opportunities, promotion prospects/salary, unpaid overtime

2.2. A study of occupational stress among medical and pharmaceutical workers in Morocco and Germany

To check whether medical workers in these clinics are experiencing excessive psychological stress, as well as which categories of these workers are most susceptible to stressful situations, we surveyed different categories of doctors, nurses, medical staff and administration in public clinics providing first aid to the population. Among the countries and clinics, the following were selected Clinique Internationale De Marrakech (Marrakesh, Morocco) and University Hospital Muenster (Münster University Hospital, Muenster, Germany). Both clinics are popular multidisciplinary medical centers in their respective countries. The survey was conducted using a Google form among different occupational and professional groups of medical and pharmaceutical workers. The survey resulted in 220 questionnaires from both clinics.

The University Hospital Münster specializes in oncology, cardiovascular, neurological diseases, transplant medicine, psychiatry and psychosomatics, and pediatrics with a special focus on rare diseases in children, traumatology, orthopedics, prenatal medicine and infertility treatment. Research and training of

medical students are also of key importance, thanks to which the clinic's specialists make a huge contribution to the development of medicine as a whole.

Marrakech International Hospital is a multidisciplinary hospital with international standards, modern technical platform. Operating departments Center of Excellence in Cardiology and Cardiovascular Surgery, New Neurocenter, Neurology, Neurosurgery and Neurophysiology, Diagnostic and Treatment Center, General and Specialized Consultations, Analytical Laboratories CIM - Center for Aesthetic Medicine and Plastic Surgery.

To do this, we asked in the questionnaire to assess the level of personal stress at the workplace on a 10-point scale. We presented the results of the study in the form of a radar chart built in Microsoft Excel (Fig. 2.3).

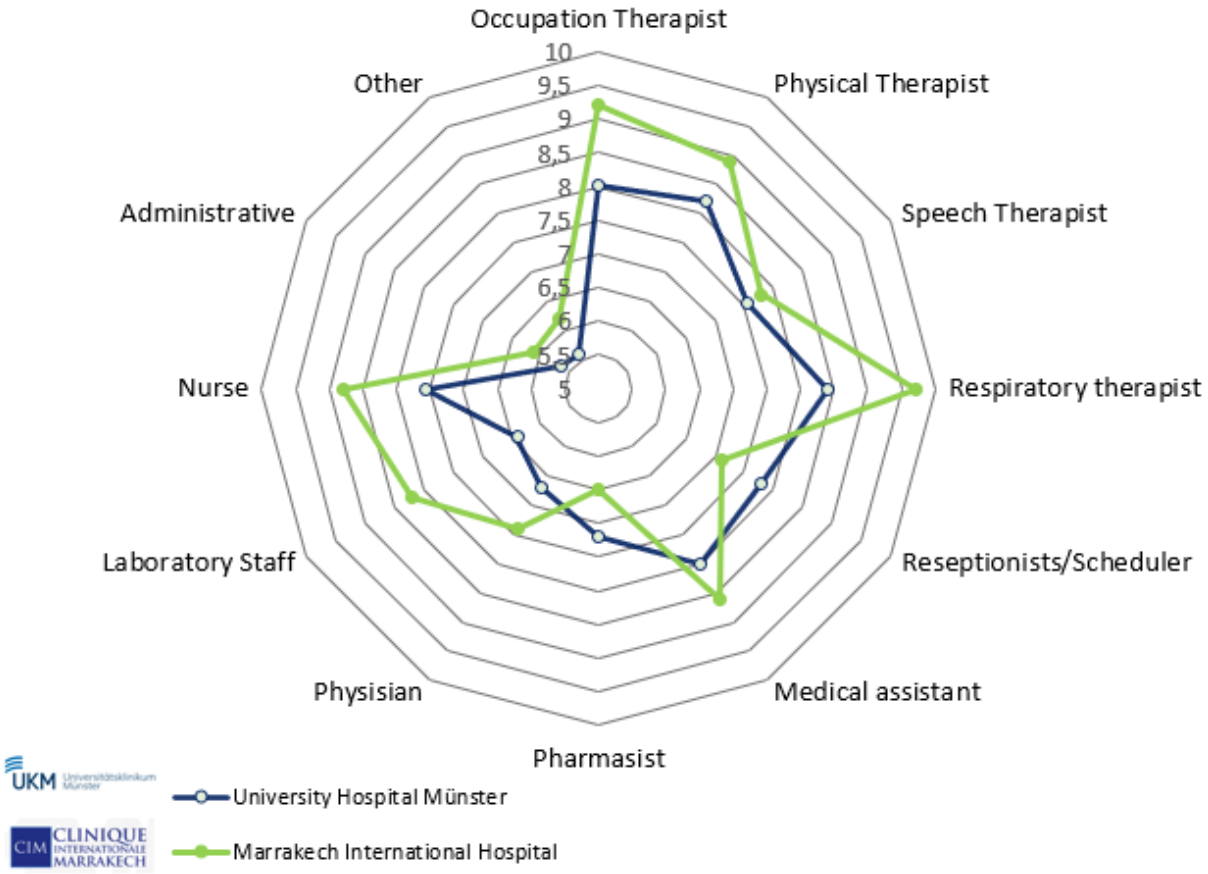

Fig. 2.3. Distribution diagram of self-esteem psychological stress scores among different categories of medical stuff in surveyed hospitals in Morocco and Germany

The second stage of the study was a survey based on the Eysenck Self-Assessment of Mental States.

The Self-Assessment of Mental States by G. Eysenck (Appendix B) allows you to measure indicators of such emotional states as anxiety, frustration, regression, and aggression. These states are important elements in determining a person's overall adaptive capabilities. The author of the methodology is Eysenck Hans Jürgen, an English psychologist, one of the leaders of the biological direction in psychology, and the author of the factor theory of personality.

To identify more specific and specific features of stress in healthcare workers, it was decided to divide the respondents into three groups by age. The first group consists of healthcare workers aged 26 to 35, young professionals who have recently received their specialty and have a short work experience. Not all of the respondents in the first group have their own families, and their physical condition during the survey was satisfactory. The second group consists of medical workers aged 35 to 50. The majority of the group already have full families, but there are workers, mostly women, who have single-parent families. During preliminary conversations before the survey, some representatives admitted to having chronic diseases and bad habits. The third group consists of healthcare workers aged 50 and older. The respondents have a long work experience, all of them have families, and almost all of them admitted that despite the specifics of their profession, they have chronic diseases and bad habits.

The purpose of the health and marital status survey is to look deeper into the personality of the respondents and find those features that could be the root cause of stress in general, or even depression. It is impossible to consider professional stress separately from personal life; all its symptoms and consequences have a powerful impact on personal life and health. As a rule, manifestations of professional stress are the cause of dissatisfaction in personal life.

In the process of processing the data (Table 2.1), the following results were obtained: the first group has a not critical, but high level of aggressiveness.

Table 2.1.

Comparison of the emotional states scale by groups

Scales	Group I Level on the scale	Group II Level on the scale	Group III Level on the scale
Anxiety scale	Low	Medium	Low
Frustration scale	Medium	High	Low
Aggressiveness scale	High	High	Medium
Regretfulness scale	Medium	High	Medium

This result can be explained as a protective reaction of the body to stress and characterizes the personality as persistent, able to achieve their own needs against all odds, and competitive. The experience of emotional distress on the anxiety scale is at a fairly low level. The surveyed healthcare workers of the first group have confidence and a sense of stability. The average level on the frustration scale once again indicates the presence of aggression in behavior. At this stage, there is no question of the emergence of a sense of despair, as the level of anxiety is low.

The average level of reticence can be assessed as a sign of little experience in the professional activity of representatives of the first group.

Medical workers of the second group have a not critical, but high level of aggressiveness and rigidity on the scale of aggressiveness and rigidity. Such a result can be considered as a functioning of the body's defenses, but internal conflicts among the surveyed healthcare workers of the second age group are not excluded. Aggression is expressed as an outburst of anger or other impulsive behavior, such as hostility.

The scores of the anxiety and frustration scales are at an average level, which indicates that stress at this stage has not reached the level of distress and the person has the opportunity to adjust their behavior, emotional state, rest, and turn their attention to other aspects of their life.

Healthcare workers in the third group showed low levels of anxiety and frustration. This suggests that people with more professional and life experience feel

more confident in their abilities and have a sense of security. The average level on the aggressiveness and regidity scale may indicate that they have a reaction to stressful factors, but they are able to work in a team and maintain a collective spirit. The qualities acquired with age in the course of performing professional duties, such as the ability to ask for help and the ability to receive help from others, play an important role.

Thus, an adequate level of self-esteem indicates self-confidence, self-criticism, and perseverance. The presence of these traits significantly reduces the likelihood of an emotional outburst. Thus, the respondents of the third group can be attributed to those who are able to overcome anxiety and not let frustration take over, unlike the second group of respondents. Employees of the second age group react emotionally to various factors, just like representatives of the first group. They use aggressiveness to help overcome stress.

Analysis of stressful states in medical and pharmaceutical workers according to the method of U. Zunge

This methodology allows to detect the presence of depression of varying severity and to monitor the dynamics of its course (Appendix C). The methodology was developed at Duke University by psychiatrist Dr. William Zung in 1965. Zung assumed that depressive disorders occur as post-traumatic or post-stress disorders. This methodology is based on the complaints of patients who suffered from depressive disorders. The scale is sensitive to depressive disorders that manifest themselves in sleep disturbances, decreased activity, depressed mood, and somatovegetative reactions of the body, such as disorders of the endocrine and cardiovascular systems. The methodology involves not only screening diagnostics, but the scale is also used to assess the severity of depression.

The questionnaire consists of 20 statements, and the results of the study are organized into three scales: depressive affect, somatic symptoms, and depressive experiences. The time spent on the survey is about 8-10 minutes. According to the survey results, the first age group scored an average of 23 points, which indicates that healthcare workers in this group do not have depressive conditions.

The second group scored an average of 57 points, which indicates that there is mild depression of situational or neurotic origin among the representatives of this group.

The third age group showed an average score of 31. These results indicate that older healthcare workers do not have depressive conditions. People are more self-confident and have a stable stress resistance to various conditions of professional activity.

2.2 Analysis of mental well-being/disabilities and conditions among medical and pharmaceutical professionals through a survey

A questionnaire was developed among different groups of medical and pharmaceutical workers of the recognized clinics concerns for healthcare workers' mental and physical health, their families, their work environments, their willingness to stay in the healthcare field and patients in their care:

1. Question No. 1 regarding feelings experienced in the past 3 months
2. Question N o.2 emotional and mental well-being/unwell-being factors that affect the respondents
3. Question No. 3. Presence/absence of emotional support for the respondents
4. Question No. 4. Sources of stress in the respondent's workplace
5. Question No. 5 Expectations related to support from the administration of the health care facility
6. Question No. 6 Expectations related to support outside of work (finances, home, friends)
7. Question No. 7 Reflections on changing jobs due to the occurrence of stressful conditions and deteriorating mental health.

The results of the survey on feelings workers regularly experience «In the last six months, which of the following feelings have you been regularly experiencing?» in Table 2.2.

Table 2.2.

Analysis of feelings workers regularly experience parameters

Parameter assessment %	Total	Administrative Support Staff	Other Support Staff (Janitor, Food Service, Supply)	Direct Care Support Staff (CNA, LVN, MA)	Hospital Technician (Respiratory, Radiology, Lab, etc.)	Other Professional (Social Worker, Pharmacist)	Other
Stress	89,7	76,5	63,5	92,3	90,1	86,4	70,2
Anxiety	80,2	75,4	60,2	90,2	83,5	80,3	63,8
Exhaustion/ Burnout	77,4	68,7	55,6	89,9	75,5	70,3	57,8
Overwhelmed	76,1	66,5	50,6	88,7	74,3	65,4	55,4
Frustration	74,7	60,2	40,7	82,7	67,8	60,2	40,2
Unappreciated	64,6	58,8	40,3	75,6	60,4	56,8	37,3
Sadness	52,1	40,6	35,7	63,5	57,9	46,7	33,6
Fear	43,2	35,2	33,4	54,6	54,2	33,2	30,2
Anger	40,5	30,2	22,8	55,7	50,5	27,8	23,4
Powerless	38,7	22,4	21	54,6	50,2	20,3	22,6
Disconnected	33,2	16,5	15,6	40,2	43,5	16,8	20,5
Grief	32,6	12,4	14,5	33,5	31,3	14,8	17,8
Loneliness	20,7	10,2	13,5	22,6	26,5	12,1	16,2
Hope	15,8	10	11,9	14,6	20,4	8,7	10,3
Gratitude	13,4	7,78	8,5	12,1	13,2	6,5	7,9
Pride	7,6	5,4	6,2	6,5	11,3	5,2	4,5

Among the professional groups of healthcare workers, Stress, Anxiety, Exhaustion/Burnout, Overwhelmed, Frustration, and Unappreciated are experienced mainly by Direct Care Support Staff (CNA, LVN, MA) and Hospital Technician (Respiratory, Radiology, Lab, etc.) at 92-75%. Other Professional (Social Worker, Pharmacist) and Administrative Support Staff experience these conditions to a lesser extent, at a general level of 86-56%. However, these figures are quite high and characterize work in hospitals and healthcare as emotionally exhausting with high levels of stress and professional burnout (Fig. 2.4).

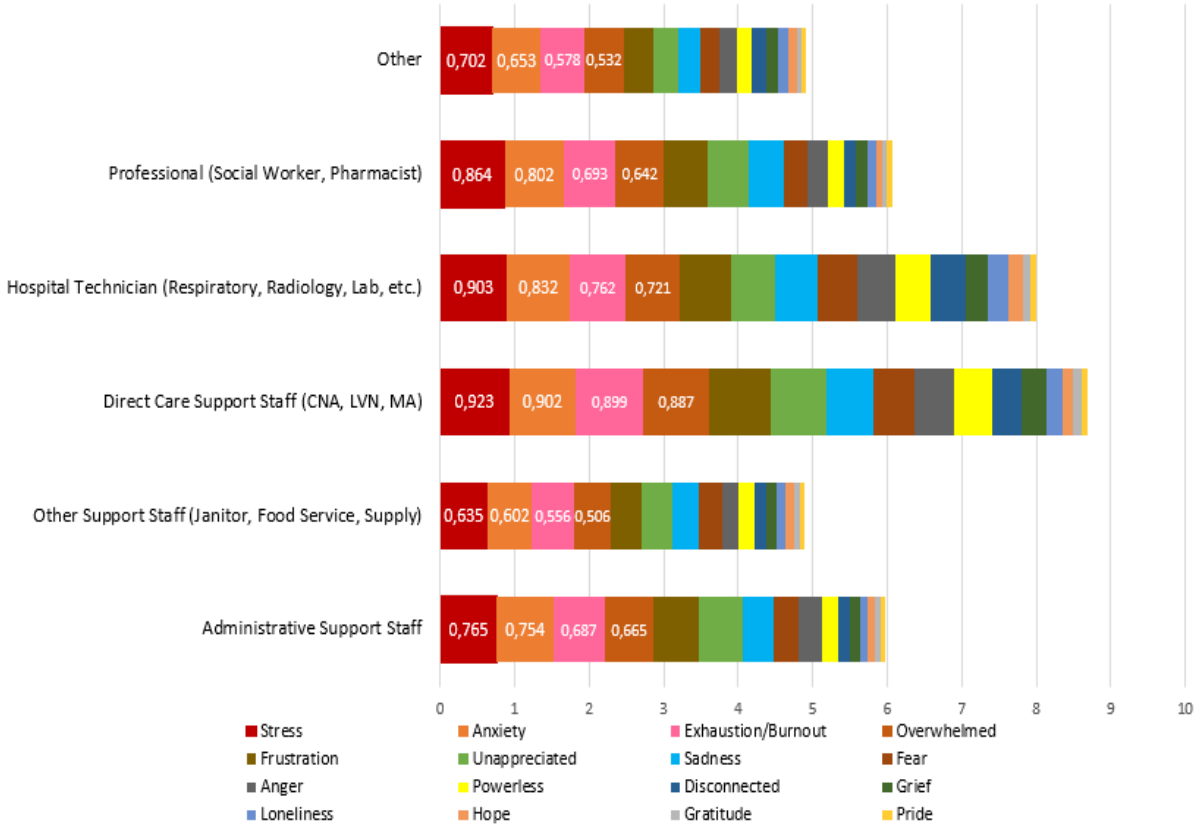

Fig.2.4. The results of the survey on feelings medical and pharmaceutical workers regularly experience

Determination of the frequency of stressful conditions in medical and pharmaceutical workers in the total number of cases showed the top 3 manifestations of stressful conditions of physical health of medical and pharmaceutical workers: Emotional exhaustion (88-78%), Trouble with sleep (79-76%) and Physical exhaustion (78%). Other manifestations of stress are also common among medical and pharmaceutical personnel: Work-related dread (82-56%), Compassion fatigue (67-65%), Change in appetite (overeating or undereating) (53-46%).

The results of the entanglement regarding the increased impact on the emotional and physical health of medical and pharmaceutical workers are in Table 2.3.

Table 2.3

Analysis of the emotional and physical health of medical and pharmaceutical workers among professional groups

Parameter assessment	Total	Administrative Support Staff	Other Support Staff (Janitor, Food Service, Supply)	Direct Care Support Staff (CNA, LVN, MA)	Hospital Technician (Respiratory, Radiology, Lab, etc.)	Other Professional (Social Worker, Pharmacist)	Other
Emotional exhaustion	0,82	0,82	0,81	0,85	0,88	0,78	0,79
Trouble with sleep	0,75	0,77	0,84	0,76	0,79	0,76	0,59
Physical exhaustion	0,70	0,69	0,62	0,74	0,78	0,79	0,58
Work-related dread	0,63	0,54	0,62	0,82	0,71	0,56	0,53
Compassion fatigue	0,58	0,52	0,54	0,63	0,64	0,67	0,47
Change in appetite (overeating or undereating)	0,51	0,61	0,54	0,48	0,53	0,47	0,42
Heightened awareness/worry/ attention to being exposed	0,39	0,36	0,43	0,42	0,37	0,36	0,41
Upsetting thoughts, images and/ or dreams	0,30	0,27	0,24	0,28	0,35	0,34	0,31
Lower self-esteem	0,30	0,34	0,21	0,22	0,36	0,3	0,36
More likely to smoke, drink and/or use substances	0,16	0,21	0,17	0,15	0,14	0,15	0,15

Based on the results of the survey, we will determine the top manifestations of stress among professional groups of medical and pharmaceutical workers, the results are shown graphically in Fig. 2.5.

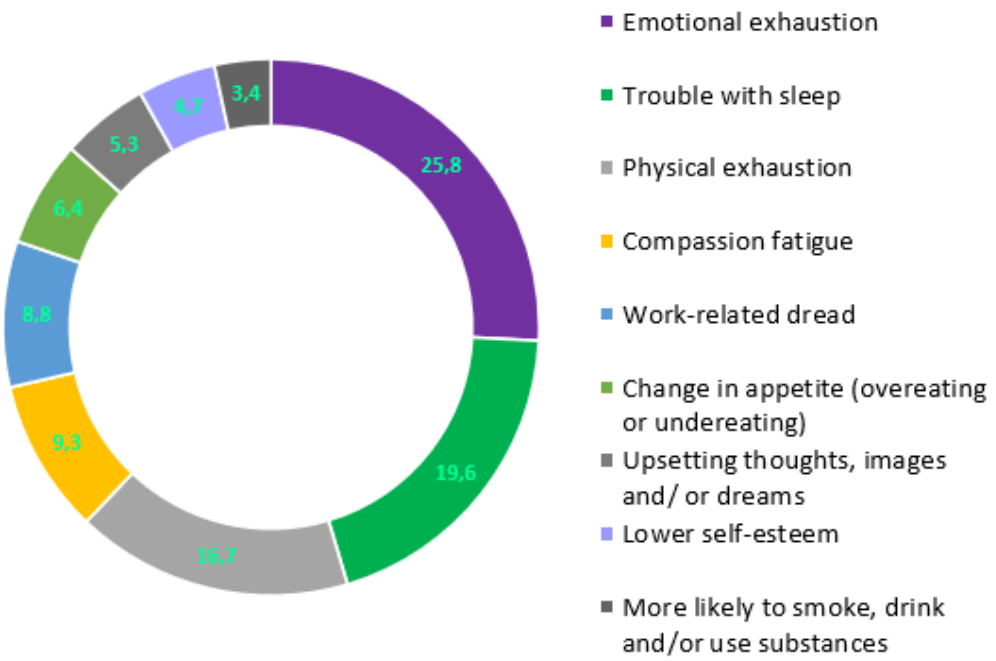

Fig. 2.5. Determination of the frequency of stressful conditions in medical and pharmaceutical workers in the total number of cases

The study has shown that the most common manifestations of stress in healthcare and pharmaceutical workers are the following: Emotional exhaustion (25.8%), Trouble with sleep (19.6%), Physical exhaustion (16.7%), Compassion fatigue (9.3%), Work-related dread (8.8%), Change in appetite (overeating or undereating) (6.4%), other manifestations of stressful conditions account for 5.2-3.4% of the total number of manifestations indicated by respondents.

The study was conducted in clinics in countries with different cultures and mentalities to identify the peculiarities of stressful conditions not only by professional orientation, age, and gender, but also by socio-cultural characteristics and to determine whether the occurrence of stressful conditions depends on the peculiarities and traditions in society regarding emotional support. Results of the analysis of the survey answers to the questions «What are your top three work-related stressors over the last six months?» are in Table 2.4 and Fig. 2.6.

Table 2.4

Analysis of the work-related stressors over the last six months

Parameter,%	Total	University Hospital Muenster	Clinique Internationale De Marrakech
Heavy/increased workload	68,4	62,3	74,5
Burnout	61,2	56,7	65,7
The concern of getting sick myself	41,25	40,2	42,3
Uncertainty when things will settle down/return to normal	24,1	21,3	26,9
Disrespect from or frustration with patients in your care	23,15	20,3	26
Job security/employment status	18,45	16,5	20,4
Witnessing a high number of deaths	16,95	16	17,9
Distractions and interruptions during work	13,35	12,5	14,2
Urgent decision making	11,05	11,5	10,6
Poor equipment and technical support	6,3	4,2	8,4
Crises	5,4	3,2	7,6
Distress about how to effectively treat patients	3,95	2,3	5,6
New unfamiliar tasks	3,35	2,1	4,6

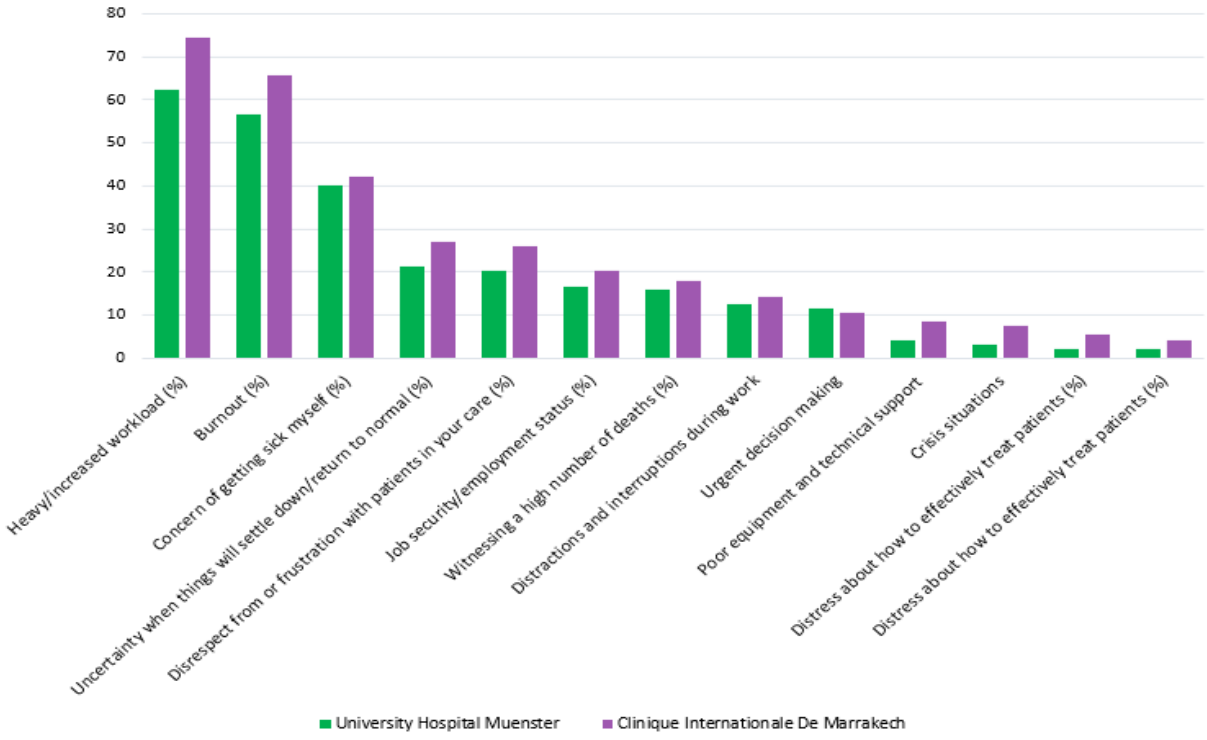

Fig.2.6. Work-related stressors among medical and pharmaceutical workers over the last six months in University Hospital Muenster and Clinique Internationale De Marrakech

The next step was to study the sources of stress of healthcare and pharmaceutical workers in their workplace. The results of the analysis of the survey for question 5: "Specify the sources of stress in your workplace" by professional and age groups are presented in Tables 2.5 - 2.6.

Table 2.5

Analysis of sources of work stress/support at work among professional groups of medical and pharmaceutical workers

Parameter assessment	Total	Administrative Support Staff	Other Support Staff (Janitor, Food Service, Supply)	Direct Care Support Staff (CNA, LVN, MA)	Hospital Technician (Respiratory, Radiology, Lab. etc.)	Other Professional (Social Worker, Pharmacist)	Other
Heavy/increased workload	0,634	0,5	0,654	0,789	0,796	0,498	0,634
Burnout	0,598	0,48	0,609	0,614	0,66	0,43	0,598
Availability of personal protective equipment and hygiene	0,45	0,48	0,51	0,487	0,38	0,356	0,45
Uncertainty of when things will settle down/return to normal	0,33	0,31	0,24	0,28	0,26	0,18	0,33
Disrespect from or frustration with patients in your care	0,26	0,28	0,24	0,27	0,22	0,18	0,26
Job security/employment status	0,21	0,18	0,22	0,213	0,196	0,12	0,21
Witnessing a high number of deaths	0,112	0,123	0,14	0,15	0,12	0,11	0,112
Distractions and interruptions during work	0,0806	0,092	0,094	0,085	0,08	0,065	0,0806
Urgent decision making	0,076	0,056	0,09	0,082	0,056	0,043	0,076
Poor equipment and technical support	0,067	0,05	0,078	0,073	0,054	0,036	0,067
Crises	0,06	0,046	0,043	0,082	0,043	0,031	0,06
New unfamiliar tasks	0,12	0,23	0,034	0,177	0,25	0,03	0,054
Increased responsibility	0,24	0,22	0,26	0,3	0,43	0,35	0,22
Distress about how to effectively treat patients	0,25	0,018	0,16	0,34	0,44	0,27	0,26

Table 2.6

Analysis of sources of work stress/support at work according age groups

Factor /Years in healthcare	Total	Less than 2 years	2 -10 years	10 - 25 years	More than 25 years
Heavy/increased workload	0,64	0,55	0,64	0,71	0,66
Burnout	0,54	0,42	0,63	0,54	0,57
Availability of personal protective equipment and hygiene	0,36	0,31	0,36	0,32	0,45
Uncertainty of when things will settle down/ return to normal	0,24	0,23	0,243	0,223	0,25
Disrespect from or frustration with patients in your care	0,17	0,154	0,21	0,185	0,14
Job security/employment status	0,141	0,157	0,163	0,173	1,15
Witnessing a high number of deaths	0,13	0,134	0,157	0,128	0,113
Poor equipment and technical support	0,07	0,053	0,065	0,084	0,063
Distractions and interruptions during work	0,55	0,33	0,46	0,68	0,71
Urgent decision-making	0,46	0,43	0,32	0,52	0,58
Crisis situations	0,19	0,25	0,31	0,13	0,056
New unfamiliar tasks	0,20	0,32	0,2	0,15	0,12
Increased responsibility	0,13	0,25	0,13	0,09	0,06
Distress about how to effectively treat patients	0,02	0,0185	0,037	0,031	0,013

Overall, less than 20% of workers felt they had adequate emotional support, with only 17% of support staff such as janitors, food service, supply, etc. expressing they did the lowest rate among job types.

The most vulnerable to stressful conditions in the workplace are Hospital Technician (Respiratory, Radiology, Lab. etc.) (79%) та Direct Care Support Staff (CNA, LVN, MA) (78%). The following sources of stress in the workplace predominate: Heavy/increased workload (64%), (55%), Distractions and interruptions during work Burnout (54%), Availability of personal protective equipment and hygiene (45%), Increased responsibility (24%), Distress about how

to effectively treat patients(25%), наймен ше: Poor equipment and technical support (7%), New unfamiliar tasks (12%), Urgent decision making (7%).

The graphical distribution of sources of stress among medical and pharmaceutical workers in the studied hospitals is shown in Fig. 2.7.

Fig.2.7. Sources of work stress/support at work among professional groups of medical and pharmaceutical workers

We also analyzed the factors that reduce the manifestations and occurrence of stress in medical and pharmaceutical workers and the results of answering the question «What are your top three concerns about how your work has been able to support you?» among professional and age groups are presented in Table 2.7, 2.8. Fig.2.8.

Table 2.7

Analysis of challenges in getting support at work by medical and pharmaceutical workers

Parameter assessment	Total	Administrative Support Staff	Other Support Staff (Janitor, Food Service, Supply)	Direct Care Support Staff (CNA, LVN, MA)	Hospital Technician (Respiratory, Radiology, Lab. etc.)	Other Professional (Social Worker, Pharmacist)	Other
Insufficient communication from the leadership	0,52	0,51	0,57	0,48	0,62	0,53	0,43
Unable to take time off when needed to attend to own physical or emotional health	0,47	0,43	0,42	0,56	0,5	0,48	0,4
No places or time while on the job to process impact	0,43	0,36	0,32	0,43	0,53	0,46	0,37
Don’t feel like it’s okay to raise concerns at work	0,36	0,31	0,32	0,36	0,33	0,46	0,35
Inappropriate role designation, such as working outside my regular job duties	0,19	0,14	0,32	0,21	0,13	0,24	0,09
Insufficient training	0,21	0,2	0,23	0,26	0,15	0,17	0,25

An analysis of the expectations of medical and pharmaceutical workers regarding support in the workplace showed that the most important factors are the following: Inadequate communication from management (52%), time off when needed to attend to own physical or emotional health (47%), and places or time while on the job to process impact (43%).

Table 2.8

Factor /Years in healthcare	Total	Less than 2 years	2 -10 years	10 - 25 years	More than 25 years
Insufficient communication from the leadership	0,51	0,45	0,52	0,54	0,51
Unable to take time off when needed to attend to own physical or emotional health	0,42	0,38	0,44	0,49	0,38
No places or time while on the job to process impact	0,41	0,31	0,42	0,45	0,44
Don't feel like it's okay to raise concerns at work	0,31	0,21	0,26	0,35	0,42
Inappropriate role designation, such as working outside my regular job duties	0,23	0,24	0,22	0,26	0,19
Insufficient training	0,20	0,32	0,18	0,16	0,14

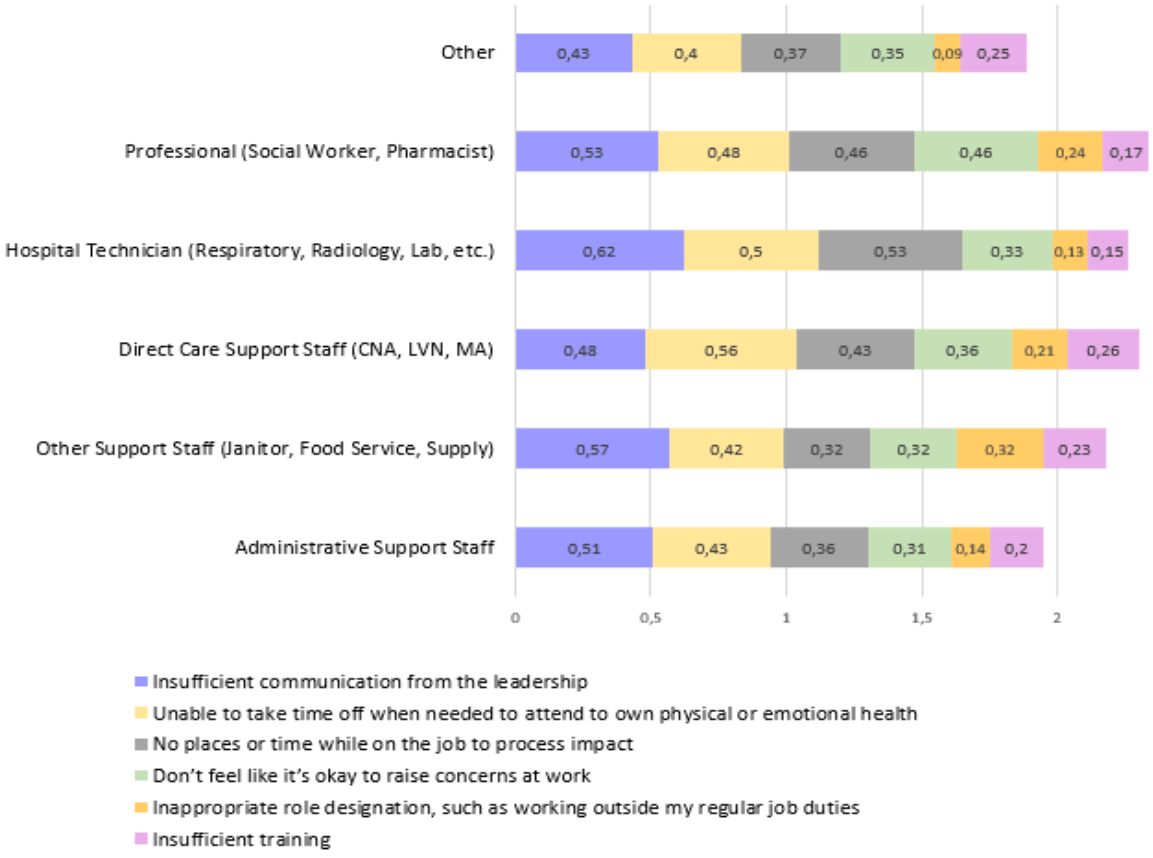

Fig.2.8. Analysis of challenges in getting support at work among professional groups of medical and pharmaceutical workers

The results of the study by length of service showed that the more years of experience, the more important is Insufficient communication from the leadership, for young professionals, time off when needed to attend to their own physical or emotional health and places or time while at work to process impact.

The study of the influence of financial well-being and personal well-being factors by the question "What are your top three personal/home-related stressors over the last three months?" by age groups is presented in Table 2.9.

Table 2.9

Analysis of the impact to personal, home and financial life of the medical and pharmaceutical workers

Factor /Years	Total	18-24	25-34	35-44	45-54	55-64	65+
Tiredness while back home	0,620	0,685	0,642	0,586	0,613	0,642	0,553
Financial stress	0,463	0,53	0,56	0,5	0,45	0,42	0,32
Worry and/or guilt about infecting household members	0,340	0,34	0,42	0,33	0,35	0,26	0,34
Taking stress out on my family	0,263	0,36	0,28	0,42	0,23	0,14	0,15
Lack of quality time with children	0,300	0,13	0,21	0,47	0,52	0,26	0,21
Lack of quality time with partner(s)	0,373	0,23	0,48	0,52	0,42	0,27	0,32
Being able to support children/being a present parent	0,240	0,15	0,18	0,26	0,34	0,36	0,15
Loneliness	0,260	0,11	0,15	0,32	0,23	0,32	0,43
My partner doesn’t understand the stress I’m under	0,242	0,16	0,32	0,4	0,27	0,22	0,08
Inconsistent work hours/coordinating schedules	0,122	0,23	0,09	0,1	0,13	0,12	0,06
Child care	0,080	0,07	0,113	0,135	0,08	0,054	0,03
Other family member(s) needing to take over my responsibilities	0,085	0,063	0,045	0,087	0,093	0,134	0,087
Feeling unsupported by my household members	0,485	0,13	0,06	0,13	0,76	0,89	0,094
Homeschooling	0,035	0,034	0,025	0,034	0,054	0,042	0,02

The analysis of the impact on personal, home and financial life of healthcare and pharmaceutical professionals showed that among age groups, the most common factors are «Tiredness while back home» (62%), «Lack of quality time with partner(s)» (30%) and «Financial stress» (46%). Factors for the 65+ group is «Loneliness» (43%), for the 55-65 group «Feeling unsupported by my household members» (0,89%), for the 45-54 and 35-44 groups «Lack of quality time with children» (52%) and «Feeling unsupported by my household members» (76%), for the 25-34 group «Lack of quality time with partner(s)» (48%) and «Worry and/or guilt about infecting household members» (42%), for the 18-24 group «Transferring stress to my family» (36%) Fig. 2.9.

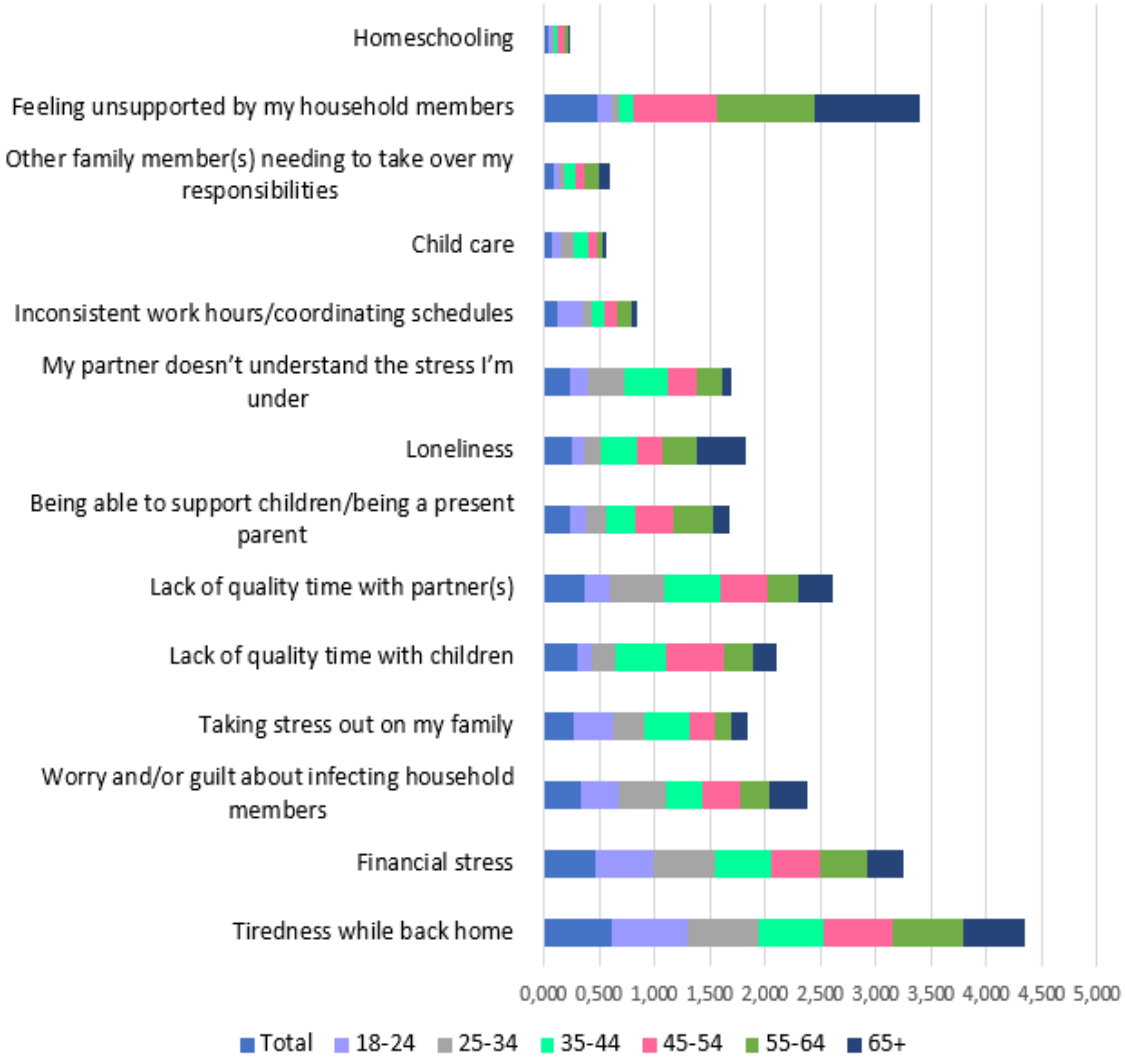

Fig.2.9. Analysis of the impact to personal, home and financial life of the medical and pharmaceutical workers

The last key question in the survey of medical and pharmaceutical workers in clinics in two different countries (Morocco and Germany) was the question about the desire to change their specialty or profession as a result of stressful conditions. The results of the analysis among professional and age groups of respondents are presented in Tables 2.10, 2.11.

Table 2.10

Analysis of the wishes to change job/leave the profession

Parameter assessment	Total	Administrative Support Staff	Other Support Staff (Janitor, Food Service, Supply)	Direct Care Support Staff (CNA, LVN, MA)	Hospital Technician (Respiratory, Radiology, Lab, etc.)	Other Professional (Social Worker, Pharmacist)	Other
Changing your job (staying in healthcare, but doing different job)	0,55	0,73	0,63	0,62	0,52	0,53	0,24
Leaving healthcare as your profession	0,41	0,56	0,54	0,32	0,28	0,32	0,46
Retiring earlier than you otherwise were planning to prior to the pandemic	0,22	0,13	0,21	0,24	0,26	0,28	0,17

Table 2.11

Factor /Years in healthcare	Total	Less than 2 years	2-10 years	10 - 25 years	More than 25 years
Changing your job (staying in healthcare, but doing a different job)	0,47	0,27	0,62	0,72	0,26
Leaving healthcare as your profession	0,35	0,28	0,52	0,43	0,15
Retiring earlier than you otherwise	0,27	0,033	0,14	0,34	0,56

Visualization of the study results is shown in Fig.2.10. and Fig. 2.11.

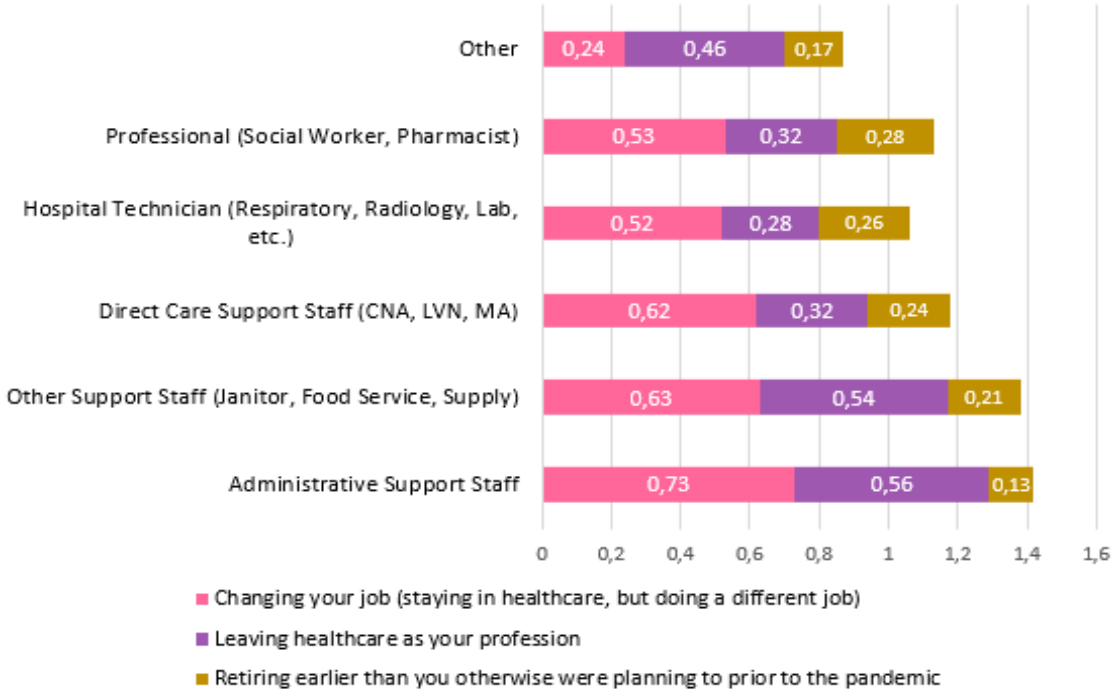

Fig. 2.10. Analysis of the shares of wishes to change job/leave the profession among the medical and pharmaceutical workers by professional groups

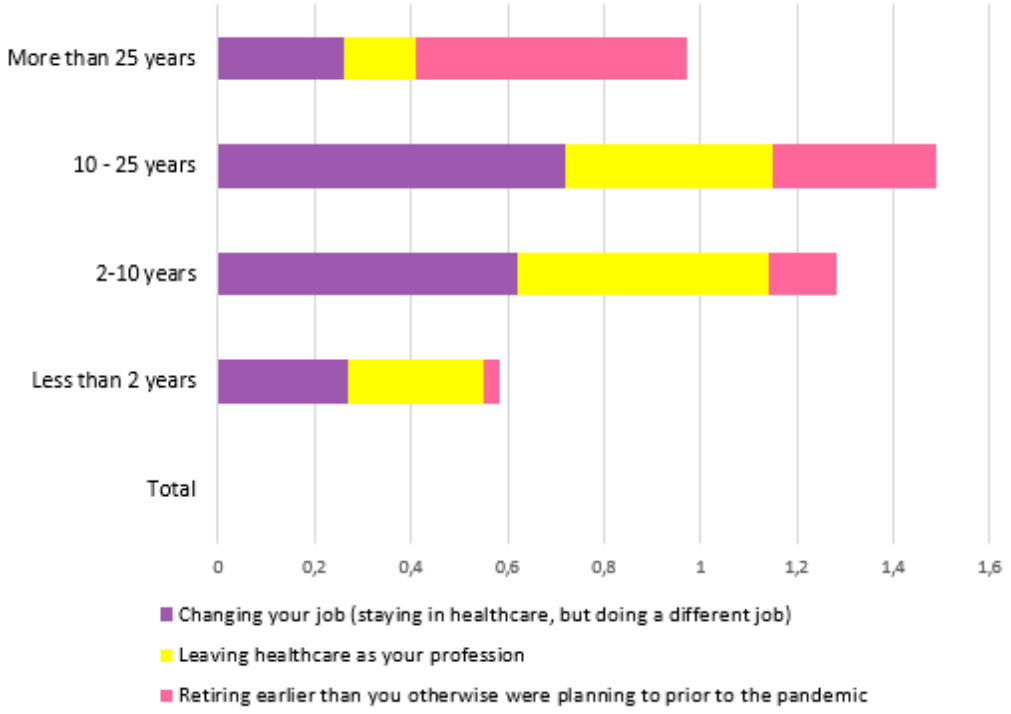

Fig. 2.11. Analysis of the shares of wishes to change job/leave the profession among the medical and pharmaceutical workers by the age group

The results of the analysis of the readiness of healthcare and pharmaceutical workers to change their specialization or work in the healthcare sector by professional groups showed that the highest level of such willingness was observed among administrative staff (73%) and Other Support Staff (Janitor, Food Service, Supply) (63%), while every second healthcare and pharmaceutical worker thought about changing their specialization or place of work. Only 28% and 32% are ready to quit their jobs.

Among the age groups, the results showed that employees with 10-25 years of experience are the most capable of changing jobs, and those with 2-10 years of experience are generally ready to leave their jobs in healthcare - 52%.

Conclusions to the unit 2

Using the methods used, the factors of stressful conditions, sources, frequency of their manifestation in different professional groups of medical and professional workers and depending on experience and length of service were identified. The expectations of the employees of the studied hospitals regarding emotional support and reduction of stressful conditions and their manifestations were determined, as well as the tendency of medical and pharmaceutical workers to change their specialization, place of work or work in general as a result of increased emotional stress and professional burnout.

The general picture can be observed in detail and qualitatively, and the characteristic features of the above conditions can be identified due to the division of respondents into age groups. The results of the study make it possible to classify and specify the peculiarities of the manifestations of stressful states of stress of healthcare workers and make it possible to develop special and more effective methods of overcoming stress for each group separately.

UNIT 3
DEVELOPMENT OF ACTIONS TO OVERCOME STRESSFUL CONDITIONS IN MEDICAL AND PHARMACEUTICAL WORKER

3.1. Coping strategies as a means of overcoming and preventing stress

The peculiarities of healthcare professionals' activities are determined by the conditions and content of work, which are directly related to the impact of a number of unfavorable factors on a person's psychological health. In today's world, healthcare professionals are the category of people most susceptible to psychological burnout, overwork, irritation, tension, stress, etc. It is important for these professionals to identify and manage their own behaviors. Coping strategies, as a component of strategic behavior, allow you to respond in one way or another to environmental stimuli. They help to prevent stress, emotional burnout, and unproductive work and adapt a person to difficult living conditions.

Coping strategies are consciously developed methods of psychological activity and behavior aimed at overcoming stressful and difficult everyday situations.

The concept of coping was first introduced by R. Lazarus and E. Folkman as part of the transactional model of stress. According to this model, stress and emotions experienced are the result of the interaction between processes and people. The relative content of emotions (threat, loss, challenge) depends on both the context and the person's assessment of the situation, and the interaction of these two factors, so to speak, "the flow of actions and reactions" [15]. Nowadays, coping is usually understood as arbitrary and conscious actions. According to the results of J. Weiland's research, two types of coping were identified: problem-oriented coping, aimed at overcoming the source of stress itself, and emotion-oriented coping, aimed at overcoming emotional arousal caused by stress. Recently, these two types of coping have been more often considered in the context of emotional regulation of the In his works, J. Weilland identifies three interrelated types of emotional regulation:

1) regulation of experienced emotions (emotion-oriented coping), i.e. processes of supporting the management of emotional states;

2) regulation of behavior (personal actions and expression of emotions);

3) regulation of the context caused by emotions (problem-oriented coping).

The multiplicity and diversity of the concept of coping strategies and empirical approaches to their research and measurement brings to the fore the task of generalizing existing approaches and results according to the criteria of coping strategies. What distinguishes them from other related concepts (such as defense mechanisms) is their effectiveness and connection with psychological well-being and performance. In this case, we focus on the results of foreign studies, which are little known in the domestic psychology of stress. Coping strategies and defense mechanisms. Since the concepts of coping strategies and defense mechanisms have been developed in different psychological traditions, the question of their interconnection and difference is quite important. As already mentioned, in the case when coping is defined as arbitrary and conscious actions, the criteria for their difference from defense mechanisms is consciousness. P. Kramer identifies two main criteria that distinguish between coping strategies and defense mechanisms:

1) conscious / unconscious nature

2) voluntary/involuntary (the nature of the processes).

Distortion involves a change in attitudes caused by an unconscious desire to reject them and obey them in order to avoid negative emotions. Revision of the state - can be regarded as a change in attitudes caused by a person's conscious desire to reject them and subordinate them to the goals of the "epistemic personality", that is, to reflect the reality of experiences as accurately as possible. Using coping strategies, a person rejects and distorts a certain perception, however, only if he is sure that his perception is false. In other cases, he tries to accept it. Of course, in the case of a coping strategy, a person may be mistaken, but his or her actions are aimed at getting closer to reality. With defense mechanisms, a person does not control reality, but changes his or her state independently of it in order to reduce negative emotions. According to this point of view, emotionally oriented coping is a heterogeneous concept. On the one hand, they are included in the

phenomena associated with avoiding or minimizing the problem - the intensification of negative emotions. Of course, in most cases, the first two groups have the main influence on the outcome of the coping strategy, but the coping strategies of the third group have three main advantages: they do not depend on the creation and social status, allow you to regulate situations that cannot be changed and can cause changes in the real world ("turn steel into iron," as the author writes). According to his research, the use of adaptive indicators implies better subjective health, but is not related to the derivative of objective health, i.e., it does not worsen the real situation. "Productive" coping strategies.

The idea of "productive" and not "productive" coping was developed in the course of empirical research within the transactional model of stress, which showed that problem-oriented coping strategies are positively associated with adaptation and health and negatively with the level of experienced stress [28]. Emotionally oriented coping plays a negative role and increases stress because it does not solve the situation itself. In general, problem-oriented coping is associated with greater performance and is subjectively assessed as more effective than emotion-oriented coping In the 1986 study by R. McKray and P. Costa, it was proven that the use of more effective strategies is associated with happiness and satisfaction decreases when controlling for the influence of personal changes. The effectiveness of certain strategies was assessed by the average score of all those who participated in the sample. The most effective strategies for solving problems were considered to be faith, seeking support, rational actions, expressing feelings, adaptation, and humor, while hostility, indecision, and fantasy were considered less effective in this study. Faith, self-development, seeking support, and humor lead to subjective stress reduction, and, conversely, indecision, self-blame, and hostility lead to increased stress. A successful study of the impact of laughter as a coping strategy on emotions was conducted by N. Kuyner and R. Martil in 1998. They showed that only those who rarely laugh have high levels of stress.

Coping is a psychological strategy and a way for a person to overcome stressful situations. The concept combines cognitive, emotional and behavioral

strategies used to cope with the demands of everyday life. In psychology, coping can be understood as an extension of conscious effort to solve personal and interpersonal problems and attempts to master, minimize, or tolerate stress or conflict. The American researcher S. Carver and his colleagues proposed an extended classification of coping strategies: [14]

1. Active coping - active actions to eliminate the source of stress.

2. Planning - planning your actions in relation to the problem situation.

3. Seeking active social support - seeking help and advice from your social environment.

4. Positive interpretation and growth - assessing the situation from the point of view of its positive aspects and treating it as one of the episodes of one's life experience.

5. Acceptance - recognizing the reality of the situation.

In the course of our study, to analyze the dominant coping strategies of doctors of different profiles, we used the methodology "Indicator of Coping Strategies", which is one of the most indicative, in our opinion, because it allows us to assess the means used by the respondents to cope with stressful situations.

In the theory of coping behavior, which was based on the work of psychologists R. Lazarus and S. Folkman, such basic coping strategies as "problem solving", "seeking social support", and "avoidance" are given.

1. The problem-solving coping strategy helps to identify the problem and find a solution quickly enough, and allows you to effectively overcome stressful situations.

2. Coping strategy of seeking social support with the help of emotional, behavioral and mental responses to cope with a stressful situation.

3. Avoidance coping strategy allows a person to reduce the emotional component of stress and relieve emotional tension. This coping strategy is capable of supporting the motivation of avoidance rather than the motivation of success, and the frequent use of this particular coping strategy may indicate intrapersonal conflicts.

Based on this, we were able to find out which behavioral strategy a larger percentage of the respondents were inclined to. Analyzing the results obtained for

hospitals in two countries - Germany and Morocco - we found that the dominant strategies differ.

Thus, in Germany, the problem-solving strategy prevails among the surveyed doctors of different profiles (78%), while in Morocco, the social support strategy prevails (Fig. 3.1.).

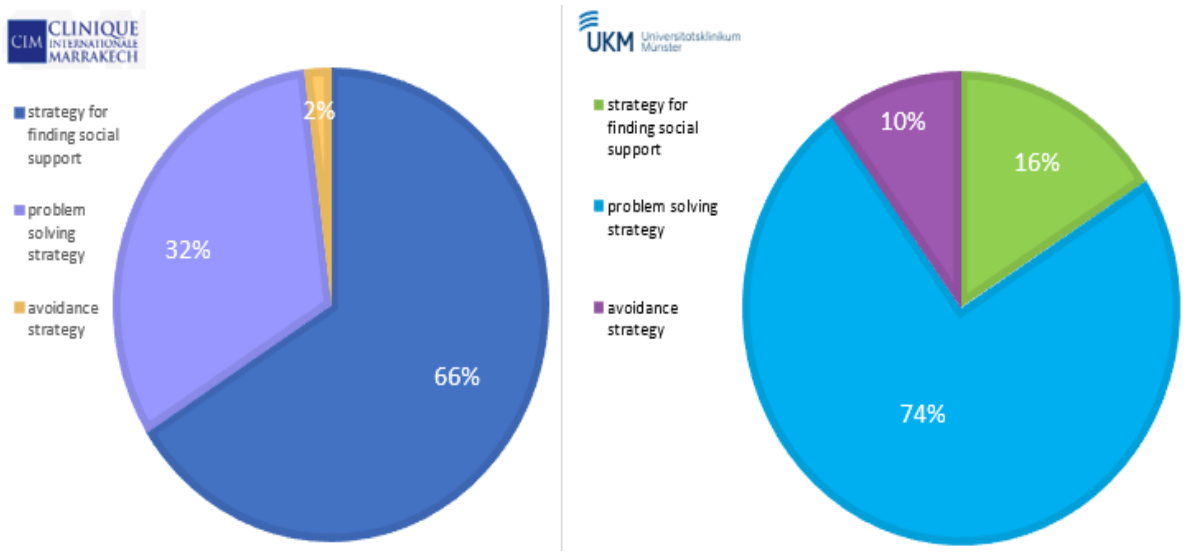

Fig.3.1. Comparison of the dominant copying strategies in Clinique Internationale De Marrakech and University Hospital Muenster

Using the Greenglass, Schwarzer, and Taubert proactive copying methodology. The results of the study are presented in Table 3.1.

The analysis of the study results showed that pharmacists and doctors have the following cognitive-behavioral resources: "Proactive coping" (36.57±1.16 at $p \leq 0.05$), "Reflective behavior" (33.16±1.08 at $p \leq 0.001$), "Preventive planning" (36.52±1.25 at $p \leq 0.001$), and for nursing staff - "Proactive coping" (24.51±1.07 at $p \leq 0.001$), "Reflective behavior" (24.081±1.15 at $p \leq 0.001$), and "Seeking emotional support" (22.13±1.48 at $p \leq 0.05$).

Table 3.1

Indicators of proactive coping in healthcare workers (M±m)

Scales	Doctors, Pharmacists	Nurses	t	P
Proactive overcoming	36,57±1,16	24,51±1,07	2,65	0,05
Reflective behavior	33,16±1,08	24,08±1,15	4,05	0,001
Strategic planning	13,24±0,53	9,75±0,69	1,58	0,04
Preventive planning	36,52±1,25	15,88±0,82	3,42	0,001
Search for instrumental support	28,00±1,60	19,50±1,10	3,29	0,05
Finding emotional support	22,36±1,21	22,13±1,48	2,35	0,05

Thus, doctors are characterized by the manifestation of joint efforts with others that facilitate the achievement of important goals and promote personal growth and the idea of possible strategic alternatives that help in performance. Doctors have well-formed ideas about a well-planned course of action in a given situation. It can be noted that this group of subjects is characterized by the need to receive feedback from the social environment, as well as the regulation of emotional distress by sharing their own experiences with others. They are guaranteed a personal stimulus to overcome stressful situations.

In turn, nurses showed average scores on such proactive coping scales as: "Search for instrumental support", "Search for emotional support" and "Strategic coping", but these results do not give grounds for their difference. Nevertheless, we cannot assume that nurses will be characterized by the desire to receive emotional support from their social environment and loved ones, as well as to obtain information tools to overcome certain obstacles in the course of achieving goals.

3.2. Development of a program to overcome the stressful conditions of medical and pharmaceutical workers

In practice, occupational risk is a combination of the likelihood of a hazardous event occurring and the severity of injury or damage to people's health as a result of its occurrence. Therefore, when assessing the risk of exposure in the workplace, the following should be considered: the likelihood of being exposed to an infection, taking into account the nature of the infectious disease (i.e., modes of transmission) and the possibility of a worker coming into contact with an infected person or contaminated materials or environments (e.g., laboratory samples, waste) when performing their duties. The severity of the adverse health impact, taking into account individual factors that influence it (such as age, chronic disease and physical condition), as well as measures that can be taken to counter the infection. During an outbreak, various groups of workers may be at the forefront of the fight against it, which may expose them to the risk of infection in the performance of their duties.

Health care workers, especially those who are actively involved in the implementation of measures to counter the outbreak (members of ambulance teams, personnel in intensive care and infectious diseases departments, workers in rescue vehicles), who may become infected from contact with infected patients and their colleagues; bodily fluids excreted by infected patients; medical equipment, personal protective equipment (PPE) in case of misuse, cleaning or disinfection; an environment that has not been properly cleaned or disinfected; laundry equipment, crockery, cutlery and medical waste that has not been properly cleaned or disposed of. For the effective operation of the healthcare sector in Morocco, it is necessary to create models for managing stress, preventing professional burnout based on taking into account and analyzing risks, predicting and evaluating the result (Fig.3.2).

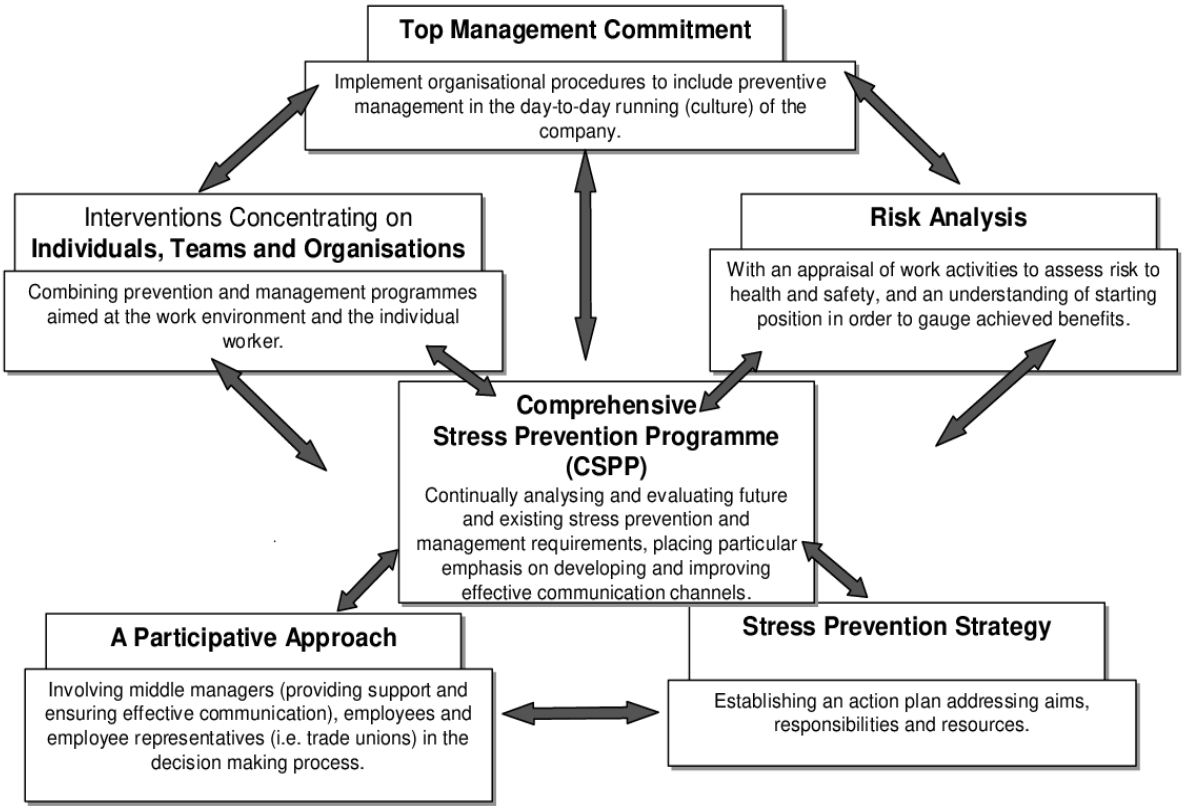

Fig. 3.2. Program to prevent stress in medical and pharmaceutical workers

The overcoming technology includes two blocks:

1. Methods of overcoming psychological stress, which are intended for use in the environment where professional activity takes place.

2. Methods of coping with psychological stress that an employee can use in their personal space.

Thus, it would be appropriate to restore the work of such specialists as a practical psychologist or a counseling psychologist in the staff of the studied hospitals. The administration should set aside time for "psychologist's hours" according to the planned schedule. The specialist will be able to professionally provide psychological assistance to the staff of the medical institution.

It is necessary to conduct educational work of a psychologist in a health care facility in order to instill in people the habit of solving their problem situations with the help of a qualified specialist, to teach ways and methods of solving psychological problems, and to teach positive thinking.

The psychologist's work with hospital staff should include the following

areas:

1. Diagnostic work to determine the psychological atmosphere in the team and timely detection of signs of psychological problems in health care workers and the use of collection programs.

2. Effective individual behavioral psychotherapy.

3. Group psychotherapy with the use of training sessions, including exercises to overcome professional stress and emotional burnout, organization of a working environment in which friendly relations among colleagues are preferred.

4. Family psychotherapy aimed at harmonizing family relationships.

5. Training in the use of coping strategies.

6. Physical exercises are one of the best ways to cope with the manifestations and consequences of stress. Strength exercises, stretching exercises (yoga) are useful, and you can use your own set of exercises that is convenient for you.

Deep diaphragmatic breathing, meditation, and autogenic training are highly effective in reducing the effects of stress factors.

Autogenic training is an effective means of psychohygiene and psychoprophylaxis, helping to manage a person's state in extreme conditions. Such training allows you to balance the sensory sphere, makes it possible to think about the fact that it is not the circumstances of life that are more important, but our attitude to them.

There are three main ways of influencing the state of the nervous system used in autogenic training:

The first is breathing, facial expressions, and gestures.

The second is the use of the active role of imagery and sensory images. It is also associated with the development of one of the modern trends in psychology - positive motivation.

The third is the impact on the psychophysiological functions of the body associated with the programming role of the word.

Autogenic training consists of seven exercises.

1. Creating an attitude of relaxation and rest.

2. Deep relaxation of the motor muscles (it is necessary to inspire a feeling of heaviness in the muscles.

3. Relaxation of the muscles of blood vessels (you need to feel the warmth).

4. Form a soothing breathing rhythm.

5. Removal of hypertension from the coronary vessels of the heart (you need to feel warmth in the left arm and the left half of the chest).

6. To activate the processes that ensure the restoration of the body's energy resources, namely digestive processes (you need to feel deep warmth in the abdomen).

8. Relieve hypertonicity of the muscles of the blood vessels of the brain (you should feel a slight coolness in the face).

The exercises should be learned gradually and sequentially one after the other. You should only start working on the next exercise if you have fully mastered the previous exercises. Typically, it takes two weeks to complete one exercise if you practice it daily. An exercise is considered mastered when the desired sensation is evoked quickly. It is advisable to practice with free attention, which is focused on body sensations without volitional effort.

Exercise for developing self-regulation.

Performed when necessary to relieve excessive arousal.

1. Body position - sitting. Eyes half closed, muscles relaxed.

2. Perform diaphragmatic breathing. Inhale for 4 seconds, with the front wall of the abdomen protruding forward. Exhale for 4 seconds and retract the anterior abdominal wall.

3. Hold your breath for 8 seconds.

4. The exercise should be repeated 8 times.

Exercise to relieve fatigue

1. Take a comfortable position in a chair, relax and close your eyes.

2. Mentally examine your fingers, forearms, and shoulders one by one, imagining them completely relaxed.

3. Mentally examine the muscles of the face and neck, trying to relax the

clenched areas.

4. Do the same for the legs and trunk.

5. Imagine yourself in a place where you usually feel good (for example, in the woods, on the seashore or in the mountains). Try to feel the smells and sounds of those places that are pleasant to you.

6. Stretch vigorously, then tighten your muscles and stand up.

5. Medical institutions have physiotherapy and exercise therapy departments where medical professionals can also perform procedures such as exercise therapy, massage, and electroshock according to agreed schedules.

Massage is a great way to relax and relieve stress. It can be used in combination with aromatherapy.

The procedure of electro-sleep is indicated for people of extreme professions, people with a tense psyche, those who are under constant stress, tension, when you need to quickly switch consciousness. Electrosleep helps to relax those areas of the brain that are responsible for the speed of switching. The result of this procedure is a sharp increase in the productivity and efficiency of the brain.

6. To avoid stressful situations and build stress resistance, it is important for a person to develop an optimistic outlook on the world. Friendly communication with colleagues, discussing with them your own and common difficulties that arise in the course of professional activity is in itself an effective means of reducing stress. Building self-confidence, working on creating a new habit and the ability to say "no" will gradually reduce the number of stressors in a person's life.

A psycho-training program has been developed to prevent and correct psychological stress in healthcare workers while performing their professional duties. This work is based on a group form of work.

Training program: "Identifying and overcoming stress in healthcare workers"

Goal: Prevention of stressful situations in healthcare workers. Objectives:

1. to identify personal neoplasms that interfere with the adequacy of self-awareness and reduce the level of social and psychological competence of healthcare workers;

2. to teach participants to reduce the level of situational and personal anxiety;

3. to develop practical skills of self-control in different situations;

4. to master basic relaxation and auto-training techniques;

To consolidate and develop the empathic qualities of healthcare workers. Materials: markers; felt-tip pens; sheets of paper; stickers; posters; whiteboards).

Table 3.1.

Programme Structure

№	Types of activities	Materials	Time
1.	Information unit	-	10 min
2.	Exercise 1: Greetings	-	10 min
3.	Exercise 2. The magic box	stickers, pens	15 min
4.	Exercise 3: "What is stressful for me?"	posters, markers	15 min
5.	Exercise 4: "Let's relax"	-	10 min
6.	Exercise 5: "You are good because..."		15-20 min
7.	Exercise 6: "Simple statements"	-	15 min
8.	Exercise 7. "My impressions of the class"	-	10 хв.

The course of the interactive session: Introduction by a practical psychologist.

Occupational stress can and should be resisted because it is not the stress itself that is dangerous, but the peculiarities of its experience and the conflicts it can provoke.Stressors can be both physical and psychological stimuli, real or imaginary.

Exercise "The Magic Box" How to do the exercise:

Participants are asked to answer the question "What do you expect from today's session?". Each person writes down their answer on a post-it note, reads it aloud, and pins it to the poster in the shape of a "magic box."

Brainstorming "What is stressful for me?"

Participants are asked to answer the following questions: "What does the term 'stress' mean to you?", "How can you characterize the phenomenon of stress?". Participants write down all their answers on a poster. After that, together with the

psychologist, they summarize what they have said.

Answer options:

- problems at work;
- personal problems;
- mental stress;
- feeling of insecurity;
- failures, fears, nervous breakdowns;
- unstable financial situation;
- disasters, accidents, etc.

Practical psychologist: So, the stresses that arise in life can be imagined as corridors that need to be walked through. Someone goes through them faster, someone slower, someone finds it easier, and someone finds it more difficult, but everyone has to go through them.

Exercise "Let's relax" How to do the exercise:

Participants are asked to master the skills of quick muscle relaxation. To do this, you need to perform relaxation exercises that relax the body and improve your mood. In the event of a stressful situation, such exercises help to reduce physical and emotional tension, and help to better feel your own body and emotions.

Practical psychologist:

Make yourself as comfortable as possible, close your eyes. Focus on your breathing for 30 seconds. Start relaxing from the sternum. Try to inhale a lot of air, take a deep breath. Then hold your breath and relax. Now exhale all the air from your lungs and return to normal breathing. Let's move on to your hands. First, I'm going to ask you to clench both hands into fists as tightly as you can. Then relax and rest. Now let's work with the shoulders. We carry a lot of tension and stress on them. Lift your shoulders, lift them even higher. Move your shoulders in a vertical plane towards your ears. Mentally try to reach your shoulders to your earlobes. Hold this position and relax. Focus your attention on the feeling of heaviness in your shoulders. Lower your shoulders, let them relax completely.

Feedback:

1. Did everyone feel the tension in their sternum when they breathed in?

2. Did you feel relaxation after exhaling?

3. Did you feel a sense of lightness in your body after doing the exercises?

Exercise "You are good because..."

How to do the exercise: participants are divided into pairs. One of the pairs should repeat three times: "I am not liked because..." and finish the sentence. His partner has to respond to each phrase with a sentence that begins with the words: "Anyway, you are good because...". Then the participants change roles and repeat the exercise, which helps to build mutual support skills.

Feedback:

1. How did you feel during the exercise?

2. Was everyone able to respond to their partner's words in the way suggested?

3. How did it feel to be supported?

How often do you receive words of support from other people?

Exercise "Simple statements"

The participants are asked to repeat clear and simple statements that help to overcome emotional stress. Positive formulas should be repeated out loud several times daily or written down on paper.

1. I feel good now;

2. I am in full control of my feelings and emotions;

3. I have enough energy and vitality to overcome this problem;

4. I can easily avoid stress and overcome it;

5. I am doing well.

Participants create and voice their own positive attitudes and statements. They should be clear and concise and should not contain the particle "not". Summarize the results of the interactive session.

Conclusions to the unit 3

It was proposed to use coping strategies to overcome and reduce direct stress and ensure the mental health of medical and pharmaceutical workers. Based on the method of R. Lazarus and S. Folkman method, the dominant coping strategies for medical and pharmaceutical workers in hospitals in Germany and Morocco were identified, and it was found that the dominant coping strategy at the University Hospital Muenster is the problem-solving strategy (74%), and at the Clinique Internationale De Marrakech - the strategy of seeking social support (66%).

The study also identified indicators of proactive coping in the activities of doctors, pharmacists, and nurses, and found that "Proactive coping", "Reflective behavior", and "Preventive planning" are typical for doctors, and "Seeking emotional support" prevails for nurses.

The Program to prevent stress in medical and pharmaceutical workers was developed and measures to develop empathic qualities were proposed.

CONCLUSIONS

Based on the results of the study, the following scientific tasks were identified.

1. It has been determined that stressful conditions are psychological states in which a person experiences powerful mental and physical activity of the body. This state is the body's reaction to stimuli, both negative and positive. The consequences of prolonged stress in healthcare professionals are emotional burnout, physical exhaustion, and overwork.

2. It is proved that the burnout syndrome of healthcare workers who provide a wide range of medical services in a medical institution or at home in modern conditions is caused by a number of specific features of their activities. These include a huge responsibility for the life and health of patients, which is a heavy burden on their shoulders; prolonged exposure to negative emotions - suffering, pain, despair, irritation.

3. It has been established that burnout is a complex of mental experiences and behaviors that affect the employee's performance, physical and mental well-being, as well as personal relationships. After summarizing many definitions of burnout and analyzing the data, we identified three main components: emotional and/or physical exhaustion, depersonalization, and reduced work productivity.

4.The empirical study found that healthcare workers have an extremely high level of professional stress, Anxiety, Overwhelmed, Frustration, Unappreciated. The majority of doctors and pharmacists have an average or below average level of stress resistance and stress tolerance. The nature of the manifestation of stressful conditions depends on professional specialization, length of service, work experience, and age.

5. It has been determined that among the most common manifestations of stressful conditions among health care workers are Emotional exhaustion, Trouble with sleep, Physical exhaustion, Compassion fatigue. Maps of stressful conditions are built on the example of clinics in two countries - Morocco and Germany, differences in the nature of the manifestation of stressful conditions among professional groups of medical and pharmaceutical workers are established.

6. It was found that health care workers need adequate emotional support to reduce the manifestations and consequences of stressful conditions only 17% of support staff, such as cleaners, catering and supply workers, indicated that they need adequate emotional support, which is the lowest rate among all categories of employees.The analysis of expectations of medical and pharmaceutical workers regarding support in the workplace showed that the most important factors are the following Inadequate communication from management, lack of time off when needed to maintain their physical or emotional health, and time at work to process the effects of stress. The results of the study by length of service showed that the longer the length of service, the more important is the lack of communication from management, for young professionals - the lack of time off when needed to maintain their physical or emotional health, as well as space or time at work to process the effects of stress. It was also found that the readiness to change specialization or profession is observed for professional groups, with the highest level of such readiness observed among administrative staff (73%) and other support staff (cleaners, (63%), while every second medical and pharmaceutical worker has thought about changing specialization or place of work. Only 28% and 32% are ready to quit their jobs.

7. It is established that organizational measures in a medical institution play an important role in preventing professional burnout. Managers should constantly monitor the condition of their own specialists, conduct various preventive trainings, stimulate motivation and maintain professional tone. It is also important to set realistic time frames for completing tasks, create clear job descriptions and responsibilities, create an atmosphere of mutual support in the work team, and establish clear communication.To overcome stressful conditions, medical and pharmaceutical professionals are recommended to use coping strategies that combine cognitive, emotional and behavioral strategies used to combat stress. Among the most common ways of coping with stress (coping strategies) among healthcare professionals are: confrontation, decision planning, self-control and responsibility.

REFERENCES

1. Burnout Clinical Subtypes Questionnaire (BCSQ-36): Reliability and validity study in Latvia / M. Abeltina et al. *Psychol. Health Med*. 2020. Vol. 25. P. 1–12.

2. An instrument to operationalize the balance between risks and resources and predict job burnout / N. Bebiroglu et al. *Int. J. Environ. Res. Public Health*. 2021. Vol. 65. P. 67–78. URL: https://www.mdpi.com/1660-4601/18/17/9416 (Date of access: 30.04.2024).

3. Protocol of the Study on Emergency Health Care Workers' Responses evaluated by Karasek Questionnaire: The SEEK-Study Protocol / J. B. Bouillon–Minois et al. *Int. J. Environ. Res. Public Health*. 2021. Vol. 47. P. 34567. URL: https://www.mdpi.com/1660-4601/18/8/4068 (Date of access: 30.04.2024).

4. The behavioural, cognitive, and neural corollaries of blunted cardiovascular and cortisol reactions to acute psychological stress / D. Carroll et al. *Neurosci. Biobehav. Rev.* 2017. Vol. 77. P. 74–86.

5. Psychosocial interventions for managing occupational stress and burnout among medical doctors: a systematic review / B. Clough et al. *Syst. Rev.* 2017. Vol. 6. P. 144. DOI: 10.1186/s13643-017-0526-3 (Date of access: 30.04.2024).

6. O'Connor D. B., Thayer J. F., Vendhara K. Stress and Health: A Review of Psychobiological Processes. *Annual Review of Psychology*. 2021. Vol. 72. P. 303–321. URL: https://www.annualreviews.org/content/journals/10.1146/annurev-psych-062520-122331 (Date of access: 30.04.2024).

7. Cohen S., Gianaros P. J., Manuck S. B. A stage model of stress and disease Perspect. *Psychol. Sci.* 2016. Vol. 11(4). P. 456–463.

8. Depression's unholy trinity: dysregulated stress, immunity, and the microbiome / J. S. Cruz–Pereira et al. *Annu. Rev. Psychol.* 2010. Vol. 71. P. 49–78.

9. Chen David D. Stress Management and Prevention. 2017. URL: https://www.routledge.com/rsc/downloads/Mental_Health_Awareness_Week_Free Book_(1) (Date of access: 30.04.2024).

10. De Simone S., Vargas M., Servillo G. Organizational strategies to reduce physician burnout: A systematic review and metaanalysis. *Aging Clin. Exp. Res*. 2021. Vol. 33. P. 883–894.

11. Effect of organization-directed workplace interventions on physician burnout: A systematic review / P. F. DeChant et al. *Mayo Clin. Proc. Innov. Qual. Outcomes*. 2019. Vol. 3. P. 384–408.

12. Irwin In sickness and in health: the co-regulation of inflammation and social behavior / N. I. Eisenberger et al. *Neuropsychopharmacology*. 2017. Vol. 42(1). P. 242–253.

13. Edú–Valsania Sergio, Laguía Ana, Juan A. Moriano Burnout: A Review of Theory and Measurement. *Public Health*. 2022. Vol. 78. P. 2–24.

14. Moral distress, mattering, and secondary traumatic stress in provider burnout: A call for moral community / E. G. Epstein et al. *AACN Adv. Crit. Care*. 2020. Vol. 31. P. 146–157.

15. Work-related and personal factors associated with mental well-being during the COVID–19 response: survey of health care and other workers / B. Evanoff et al. *J. Med. Internet Res.* 2020. Vol. 22. P. e21366. DOI: 10.2196/21366 (Date of access: 30.04.2024).

16. General hospital staff worries, perceived sufficiency of information and associated psychological distress during the a/H1N1 influenza pandemic / P. Goulia et. al. *BMC Infect. Dis.* 2010. Vol. 10. P. 322. DOI: 10.1186/1471-2334-10-322 (Date of access: 30.04.2024).

17. Evaluating the association of multiple burnout definitions and thresholds with prevalence and outcomes / D. B. Hewitt et al. *JAMA Surg*. 2020. Vol. 155. P. 1043–1049.

18. Burnout mediates the association between depression and patient safety perceptions: a cross-sectional study in hospital nurses / J. Johnson et al. *J. Adv. Nurs.* 2017. Vol. 73. P. 1667–1680. DOI: 10.1111/jan.13251 (Date of access: 30.04.2024).

19. Chronic stress, work-related daily challenges and medicolegal investigations: a cross-sectional study among German general practitioners. *BMC Fam Pract*. 2019. Vol. 20. P. 143.

20. Almeida Stressor diversity: introduction and empirical integration into the daily stress model / R. E. Koffer et al. *Psychol. Aging*. 2016. Vol. 31(4). P. 301–320.

21. Cumulative stress and autonomic dysregulation in a community sample / R. K. Lampert et al. *Stress*. 2016. Vol. 19(3). P. 269–279.

22. The influencing factors of gender differences on mental burdens in young physiotherapists and occupational therapist / S.–J. Lee et al. *Int. J. Environ. Res. Public Health.* 2021. Vol. 87. P. 202–234. URL: https://www.mdpi.com/1660-4601/18/6/2858 (Date of access: 30.04.2024).

23. Accuracy of the PHQ-2 alone and in combination with the PHQ-9 for screening to detect major depression: systematic review and meta-analysis / B. Levis et al. *JAMA*. 2020. Vol. 323. P. 2290–2300. DOI: 10.1001/jama.2020.6504 (Date of access: 30.04.2024).

24. Somatic symptoms and concern regarding COVID–19 among Chinese college and primary school students: a cross-sectional survey / S. Liu et al. *Psychiatry Res.* 2020. Vol. 289. P. 113070. DOI: 10.1016/j.psychres.2020.113070 (Date of access: 30.04.2024).

25. The effects of acute psychological stress on circulating and stimulated inflammatory markers: a systematic review and meta-analysis Brain Behav / A. L. Marsland et al. *Immun*. 2017. Vol. 64. P. 208–219.

26. The relationship between psychological distress and perception of emotional support in medical students and residents and implications for educational institutions / A. McLuckie et al. *Acad Psychiatry*. 2018. Vol. 42. P. 1–7.

27. Security Providing Leadership: A Job Resource to Prevent Employees' Burnout / J. A. Moriano et al. *Int. J. Environ. Res. Public Health*. 2021. Vol. 98. P. 409–432. URL: https://www.mdpi.com/1660-4601/18/23/12551 (Date of access: 30.04.2024).

28. Neurobiological links between stress and anxiety Neurobiol / Nuria Daviu et al. *Stress*. 2019. Vol. 11. P. 2352–2895.

29. Ohrnberger J., Fichera E., Sutton M. The relationship between physical and mental health: a mediation analysis. *Soc. Sci. Med*. 2017. Vol. 195. P. 42–49. DOI: 10.1016/j.socscimed.2017.11.008 (Date of access: 30.04.2024).

30. Padden C., Concialdi–McGlynn, Lydon S. Psychophysiological measures of stress in caregivers of individuals with autism spectrum disorder: a system review. *Dev. Neurorehabilit.* 2019. Vol. 22. P. 149–63.

31. The effectiveness of a time management workshop on job stress of nurses working in emergency departments: An experimental study / A. K. Ravari et al. *J. Emerg. Nurs*. 2020. Vol. 46. P. 548.

32. Physical activity, energy expenditure, nutritional habits, quality of sleep and stress levels in shift-working health care personnel / F. Roskoden et al. *PLoS One.* 2017. Vol. 12. P. e0169983. DOI: 10.1371/journal.pone.0169983 (Date of access: 30.04.2024).

33. Sandoval–Reyes J., Restrepo–Castro J. C., Duque–Oliva J. Work intensification and psychological detachment: The mediating role of job resources in health service workers. *Int. J. Environ. Res. Public Health*. 2021. Vol. 18. P. 607–623. URL: https://www.mdpi.com/1660-4601/18/22/12228 (Date of access: 30.04.2024).

34. Simionato G., Simpson S., Reid C. Burnout as an ethical issue in psychotherapy. *Psychotherapy.* 2019. Vol. 56. P. 470–482.

35. Slavich M., Shields G. S. Assessing lifetime stress exposure using the Stress and Adversity Inventory for Adults (Adult STRAIN): an overview and initial validation Psychosom. *Med.* 2018. Vol. 80. P. 17–27.

36. Slavich G. M. Stressnology: the primitive (and problematic) study of life stress exposure and pressing need for better measurement. *Brain Behav. Immun.* 2019. Vol. 75. P. 3–5.

37. Stress-related and basic determinants of hair cortisol in humans: a meta-analysis / T. Stalder et al. *Psychoneuroendocrinology.* 2017. Vol. 77. P. 261–274.

38. Frontline healthcare workers experiences and challenges with in-person and remote work during the COVID–19 pandemic: a qualitative study / H. Sims et al. *Front. Public Health*. 2022. Vol. 10. P. 983414. DOI: 10.3389/fpubh.2022.983414 (Date of access: 30.04.2024).

39. A comparison of burnout frequency among oncology physicians and nurses working on the frontline and usual wards during the COVID–19 epidemic in Wuhan, China / Y. Wu et al. *J. Pain Symptom Manag*. 2020. Vol. 60. P. e60–e65.