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ENVIRONMENTAL AWARENESS FACTORS IN THE GENESIS OF PSYCHOSOMATIC DYSFUNCTIONS OF STUDENTS OF HIGHER EDUCATION INSTITUTIONS

Abstract. The substantiation of the conceptual foundations of ecological awareness by the subject of practical research is the cognitive goal of this article. *The purpose of the article* is to substantiate the influence of factors of the formation of environmental awareness in the genesis of psychosomatic dysfunctions of students of higher education institutions. In the research process, such *methods* as analysis, systematization, synthesis, generalization, concretization, comparison and psychodiagnostic methods were applied, using such methods as "Aesop", "Alternative", "Dominant" and the method "Assessment of the level of development of personality's adaptive abilities of A. Maklakov, S. Chermianina". Due to the author's psychodiagnostic questionnaire, by using quantitative and qualitative assessment criteria, individuals with psychosomatic dysfunctions were selected and divided into three groups: individuals with cardiovascular defects, with gastrointestinal tract dysfunction, and skin defects. *The scientific novelty* is the conceptual basis of the study of students' environmental awareness in the structure of psychosomatic interactions under the conditions of the eco-environment of higher education institutions.

Interrelation between psychological stability and the level of life stress in the educational institution's eco-environment was experimentally revealed. It turned out that a high level of life tension is not a constitutional prerequisite for the emergence of psychosomatic complaints. In the subjects of the experimental group with a high level of subjective stress, a low indicator of psychological stability is a predicate for the development of psychosomatic dysfunctions (the probability of the disease was 92%), while high indicators of stability contribute to the preservation of health (somatization took only 10%). In addition, a high level of psychological stability of an individual is associated with a developed imagination and creativity in non-standard situations, with a high level of stress. Adequate awareness and assessment of the situation, a person's persistent experience of his actions and circumstances, which are the result of personal choice and responsibility, in somatically ill individuals with high vitality acquire the value of a resource, experience that allows to adapt to health problems, harmoniously transforming meaningful life orientations. Somatic complaints of such respondents are caused by unpleasant life events, pessimistic and depressed mood in their surroundings, that is, all those components of modern life that have already become a habit in interaction with the environment.

The *conclusion* indicates the interdependence of mental and emotional factors in the formation of environmental awareness of students in institutions of higher education, explains the concept of complex psychosomatic processes that support the integrity of the organism. The imbalance between psyche and somatics produced by this interaction determines the level of professional training of the student in the educational environment. Their conceptual basis is psychogenies of the somatoform type, with predominant vegetative disorders, which is connected with the psychoanalytic interpretation of an unconscious intrapsychic neurotic complex. The origin of the symptomatology imitating physical pathology is explained by conversion mechanisms as a result of the lack of adaptive psychological protection and stability.

Key words: environmental awareness, psychological stability, psychosomatic dysfunctions, educational environment, institutions of higher education.

Introduction. Modernity interprets its conditions of existence of an individual in the postmodern society. At a time of constant growth in the degree of information and visual load, unfavorable socio-economic situation, as well as the destructiveness of various factors of the era of social changes, causes a pronounced negative impact on the functional state and adaptive resources of the body, the state of mental and somatic health of a person.

The problem of environmental awareness of students in the conditions of higher education institutions is particularly relevant, as it emphasizes the importance of studying the environmental factors of psychosomatic personality dysfunctions in the conditions of an educational environment. Complicating factors include: unsatisfactory socio-economic living conditions, martial law, the need for increased mobilization of physical and emotional resources, lack of access to resources that help overcome stress. The analysis of these factors makes it possible to assert that this problem is most typical for specialists in medical, pedagogical, psychological and other professions.

Theoretical foundations of research. Modern environmental problems today, to one degree or another, take into account the entire sphere of human social life. The importance of the ecological problem is that its place in the entire system of social life is reflected in the differentiation of a number of scientific theories (Vizniuk I., Bateson H., Varho O., Dolynnyi O., Doronina M., Kessidi F., Rubanova E., etc.), as well as in the formation of certain scientific concepts (Dagani J., Buizza C., Ferrari C. & Ghilardi A.). One of the indicators of destructive influence on personality according to these theories and concepts is a prolonged feeling of pain, which is now quite widespread in pre-medical practice. It is the substantiation of the conceptual foundations of ecological consciousness on the subject of practical research that constitutes the cognitive goal of this article.

The **purpose** of the article is to substantiate the influence of factors of the formation of environmental consciousness in the genesis of psychosomatic dysfunctions of students of higher education institutions.

Experimental part. The tense rhythm of life in the educational environment and constant presence in the energy field of negative emotions cause increased irritability, passivity, quick fatigue, lack of peace, tolerance and inner harmony, excessive concentration on one's own experiences and suggestibility. Neglect of these primary signs contributes to the emergence and development of psychosomatic dysfunctions in students. As a result, they look unfriendly, biased towards their own environment, uncommunicative and indifferent, etc.

Psychosomatic health of a person is a complex multifaceted phenomenon, which is determined by the influence of biological (genetic) and social (acquired) factors and is considered as psycho-medical-biological and socio-economic categories, which are determined by the balance with the environment and the absence of certain threatening conditions regarding the state optimal functioning of her body [1, 2].

Environmental awareness is a set of ecological knowledge of a person, his personal attitude to the environment and an idea of a person's place in the "human-environment" plane, readiness for actions that allow preserving the environment, or readiness to refrain from actions that cause damage to the environment, to support or not support for environmental policy, environmental measures, etc. Environmental awareness is measured by a level that can change during a person's life [3, 4].

The general factors of environmental awareness that affect the development of psychosomatic dysfunctions of the human body in the eco-environment of a higher education institution include the following: *psychological* (increased internal conflict, well-being, activity and mood of the individual), *biological* (parasitic, viral, bacterial, prion and genetically modified organisms, products of biotechnology, etc.), *chemical* (natural and synthetic, organic and inorganic), *physical* (vibration, noise, ultrasound, thermal, infrasound, ionizing, non-ionizing and other types of radiation), *social* (water supply, nutrition, living conditions, recreation, work, education and training) and others that affect human health [1, 3, 4].

Psychosomatic dysfunctions are prerequisites for the occurrence of diseases of internal organs and systems of the body, which arise as a result of the influence of mental and emotional factors. In the situation of influence of environmental factors on the state of optimal functioning of the body of students in the conditions of a higher educational institution, psychosomatic dysfunctions acquire a psychogenic character, the consequence of which is the development of psychosomatosis caused by symptomatic manifestations of organic pathology [4].

Environmental awareness can be characterized through its structure, which includes cognitive, affective (emotional), behavioral (conative) elements. The basis of the *cognitive element* is theoretical (professional, scientific) and practical (obtained from everyday experience of contact with the environment) knowledge. The totality of theoretical and practical knowledge will constitute the highest degree of development of the cognitive component, which will affect the level of environmental awareness in general. The *emotional element* is formed by the individual's personal, subjective assessments, his own vision of the "man - environment" system. The *behavioral element* includes the readiness for individual action and attitudes to support (or not support) social proposals. Individual actions (participation in eco-organizations, etc.) indicate a higher level of environmental awareness among students, based on the disclosure of which further research was implemented [2, 4].

The study, which was conducted on the basis of the Military Medical Clinical Center of the Central Region (Vinnytsia), involved 102 respondents (experimental group) aged 17 to 22 with psychosomatic dysfunctions, at the basis of which signs of the nosology of psychosomatosis (disorders of the gastrointestinal tract, cardiovascular complaints, neurodermatitis) were identified; and 108 people with general health indicators (control group). A comprehensive psychoneurological examination was conducted for all the respondents. On the basis of the analysis of scientific sources and the results of own research, the interdependence between environmental awareness in students and psychosomatic manifestations was established. The composition of the experimental sample qualitatively and quantitatively represents the general population, since modeling and randomization techniques were used for its formation. The used experimental design, methods of statistical processing and interpretation of results ensured internal and external validity.

The experimental base of the research during 2021-2022 was Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University and Vinnytsya National Pirogov Memorial Medical University. The total number of the sample of students was 210 people in the age category from 17 to 22 years, 222 "Medicine" and 053 "Psychology".

In the research process, such methods as analysis, systematization, synthesis, generalization, concretization, comparison and psychodiagnostic methods were applied, using such methods as "Aesop", "Alternative", "Dominant" and the method "Assessment of the level of development of adaptive abilities of the personality of A. Maklakov , S. Chermianina".

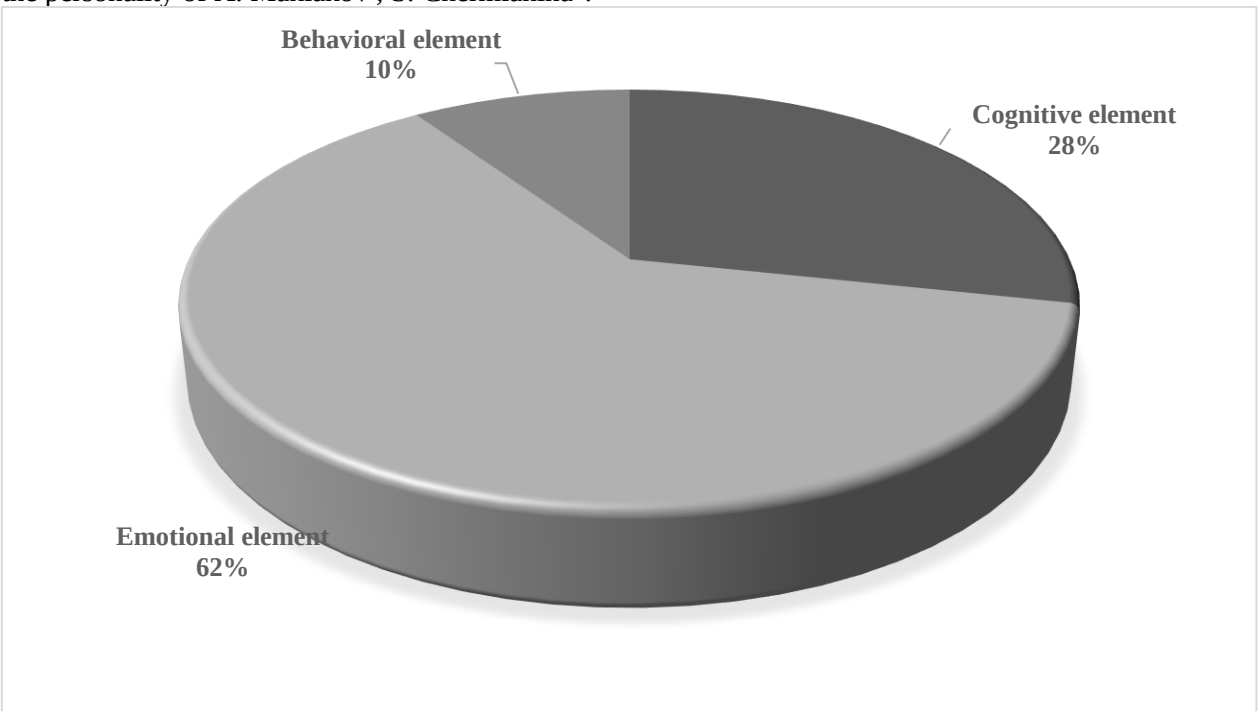

Fig. 1. Components of environmental consciousness of students according to the "Aesop", "Alternative" and "Dominant" methods

According to the "Aesop", "Alternative" and "Dominant" methods (Fig. 1), the subjective attitude of higher education students to the surrounding environment and low nature-centeredness in the conditions of the educational institution's eco-environment are reflected, as a result of which the subjective attitude to nature in the emotional plan is more dominant than in the cognitive and practical. As can be seen from the diagram, the dominant environmental consciousness of students is an emotional approach (60 people, 62%), which determines their consumer attitude towards the environment. Correlation analysis showed a significantly positive correlation of the environmental motivation of students with such parameters as "aesthetic attitude" (0.47), "cognitive attitude" (0.43) and a negative correlation with the parameters "pragmatic attitude" (-0.74), "ethical attitude" (- 0.65), which proves the superiority of external motives (convenience and comfort) over the need for knowledge about the eco-environment.

In the dominant majority, an aesthetic and careful attitude towards nature is episodically manifested, which is evidenced by the low level of development of the value-motivational component of environmental consciousness in them. Based on the results of the study, it was established that the level of the latter is characterized by the degree of their environmental motivation according to average and low indicators.

Results and their discussion. The principle of systematicity made it possible to reveal the integrity of the research object, taking into account the influence of objective and subjective factors of environmental awareness of students in the conditions of higher education institutions, in particular, the justification of psychosomatic features for the period of research. According to this principle, the general sample with the nominative marker "psychosomatic health" was formed based on the data of the medical professional advisory opinion (form No. 086).

Due to the author's psychodiagnostic questionnaire, by using quantitative and qualitative assessment criteria, people with psychosomatic dysfunctions were selected and divided into three groups: people with cardiovascular disorders (CVD), with gastrointestinal tract dysfunction (GITD) and skin defects (SD). The results of the distribution of types by psychosomatic feature in students of the eco-environment of a higher institution are shown in Table 1.

Table 1

Factors influencing the environmental consciousness on the development of psychosomatic dysfunctions in students

Psychosomatic dysfunctions	*Characteristics of the influence of factors of environmental awareness*
Cardiovascular defects	*Anxiety, hostility, repressed anger, guilt, need for self-affirmation, introversion, intrapersonal conflicts, fear of the future, loss of faith, emotional stress, increased sentimentality, demonstrativeness, hysterics, stressful life rhythm, desire for success, social significance*
Gastrointestinal tract dysfunction	*Neatness, punctuality, pedantry, justice, politeness, self-centeredness, suppressed aggressiveness, envy, offensiveness, passivity, disgust for the surrounding world, hostility*
Skin defects	*Tendency to take a passive position in interpersonal relationships, high sentimentality with loved ones, self-doubt, risk avoidance, feelings of inferiority, social isolation, negativism accompanied by fear, irritability, frustration, guilt, suspicion, and anger*

The identified features of psychosomatic dysfunctions made it possible to obtain information about the factors of environmental awareness that influence the level of psychological stability in the experimental group, in the context of which the methodology "Assessment of the level of development of adaptive abilities of the personality of A. Maklakov and S. Chermianin" was used.

A. Maklakov and S. Chermianin's methodology for assessing the level of development of the adaptive abilities of an individual (MLO) highlights the possibilities of active adaptation of the individual to the conditions of the physical and social environment at the level of optimal functioning of the human body. The determination of the average indicators in the walls according to this method showed a difference between the control group (8.8) and the experimental group (3.0), which allows us to assert a high level of vitality of the first group of subjects and, accordingly, a low indicator in the latter.

Mathematical and statistical processing of the research results using the Pearson test indicates an inverse correlation in the experimental group between parameters of vitality and psychosomatic dysfunctions (r_{xy} = 0,47; p ≤ 0,01) which indicates a lack of adequate behavioral regulation, self-control and positive reassessment of the situation. The same parameters in the control group are directly correlated (rxy = 0.47; p ≤ 0.01). In our opinion, it is this factor that ensures the activation of adaptive abilities in stressful situations, promotes psychosomatic integrity, readiness to act in conditions of high responsibility, objective reality and personal growth.

Relationships between psychological stability and the level of life stress in the eco-environment of the educational institution were experimentally revealed. It turned out that a high level of life stress is not a constitutional prerequisite for the occurrence of psychosomatic complaints. In the subjects of the experimental group with a high level of subjective stress, a low index of psychological stability is a predicate for the development of psychosomatic dysfunctions (the probability of the disease was currently 92%), while high indicators of stability contribute to the preservation of health (somatization occupied only 10%). In addition, a high level of psychological stability of an individual is associated with a developed imagination and creativity in non-standard situations, with a high level of tension. Adequate awareness and assessment of the situation, a person's persistent experience of his actions and circumstances, which are the result of personal choice and responsibility, in somatically ill persons with high vitality acquire the value of a resource, experience that allows to adapt to health problems, harmoniously transforming meaningful life orientations.

Somatic complaints of such respondents are caused by unpleasant life events, pessimistic and depressed mood in their surroundings, i.e., all those components of modern life that have already become a habit in interaction with the surrounding environment. It was established that the most important factor of psychosomatic dysfunctions for 102 people (51%) was social stress: 69 people (67.65%) had problematic relationships in the educational environment, in particular, interpersonal conflicts with their own environment (groupmates, teachers, pedagogical workers), 33 min. (32.35%) – household problems, etc.

In general, the empirical study revealed (Table 2) an inversely correlated relationship between students' resilience in the environment and the studied psychosomatic dysfunctions.

Table 2

Interconnection between indicators of psychological stability and psychosomatic disorders

Sustainability indicators	CVD	SD	GITD
High indicators	0,017	0,033	0,027
Low indicators	0,257**	0,215**	0,227**

** – the correlation is significant at p ≤ 0,01

It was established that the average indicators of psychological stability of women are significantly higher than those of men (11.13 ± 0.32 and 9.07 ± 1.02, respectively). The analysis of the obtained data by Pearson's $\chi 2$ test confirms the presence of reliable differences ($\chi 2$ = 16.87, p ≤ 0.01) of the average stability indicators of the control and experimental groups.

Conclusions. Thus, the interdependence of mental and emotional factors in the formation of environmental consciousness of students in institutions of higher education explains the concept of complex psychosomatic processes that support the integrity of the organism. The imbalance between psyche and somatics produced by this interaction determines the level of professional training of the student in the educational environment. Their conceptual basis is psychogenies of the somatoform type, with predominant vegetative disorders, which is connected with the psychoanalytic interpretation of an unconscious intrapsychic neurotic complex. The origin of the symptomatology imitating physical pathology is explained by conversion mechanisms as a result of the lack of adaptive psychological protection and stability.

The conducted empirical study of environmental influences on the development of psychosomatic dysfunctions of the body in students of education in order to increase their environmental awareness made it possible to separate the following special environmental factors: the implementation of theoretical and practical training of students in eco-oriented activities aimed at combining morality and science, which is able to provide not only the transformation of traditional efforts to provide the individual with new opportunities in interaction with nature, but also to outline the spectrum of human abilities to adequately navigate the flow of ecological realities and attitudes regarding one's own choice in the development of social criticism; inclusion of students in eco-oriented activities with the aim of training specialists who are able to resist medical, psychological and economic threats in all spheres of social life (local, regional, national and global levels); the formation

of environmentalism as a character trait in students, which will contribute to the possibility of applying ecological knowledge and skills as needed in the conditions of the ecological environment; the use of special training technologies in the conditions of the educational environment of higher education institutions in order to stimulate cognitive, conative, perceptual-emotional and axiological approaches in the formation of environmental awareness and other components that ensure its significance; formation of students' focus on education of eco-oriented values - formation of value orientations of education seekers, formation of value-semantic and emotional-volition spheres of the personality to the readiness of implementation of eco-oriented activities.

Prospects for further research. In the future, we plan to investigate the peculiarities of the prospects for the development of environmental awareness among students of various professional study profiles, the equivalent of which is the disclosure of the problem of the nature-centric approach by gender.

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