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**SUBJECTIVE ASSESSMENT OF SATISFACTION WITH PROFESSIONAL ACTIVITY OF TEACHERS OF HIGHER TECHNICAL EDUCATIONAL ESTABLISHMENT**

*This article deals with the problem of professional burnout of teachers of technical specialties of higher education. The obtained results of empirical research can be interpreted as a decrease in satisfaction with professional activities of three independent characteristics: material satisfaction, intellectual satisfaction and satisfaction with physical well-being. The overall score of teacher's satisfaction, which is located in the negative zone, was showed.*

**Keywords:** university, professional activities, satisfaction with work, burnout, teachers of technical specialties.

**Problem statement.** Modern conditions of organization of production activity assume the maximum degree of occurrence of a human in it that nowadays is treated as "human factor", in which personal sense of objectives recognition and decision of responsibility for the effectiveness of the whole system "environment – object of management - human" is put. This fact takes a particular relevance in the course of professional activity where personal and professional qualities of a person are sufficiently intertwined and cause the need for person's adaptation to the environment or to himself. In most cases, this is expressed in finding the optimal ratio of these interactions. However, we should note that the absence of such equilibrium cause the deformation of relations between the subject and professional environment. Thus, these changes may be a trigger for the emergence of such phenomenon as "professional burnout".

**Analysis of research and publications** shows that the process of professional burnout inherent in any type of work activity and it is a non-specific reaction, reflecting the presence of disrupting of the process of its organization and the need for its identification and elimination. The theoretical grounding of the problem of professional burnout as an independent phenomenon is reflected in the large number of foreign (S. Jackson, C. Maslach and A. Pines, D. Roberts, C. Cherniss, H. J. Froydenberher, J. Freidi, S. Hobfull) and native (V. V. Boiko, N. E. Vodopianova, L. M. Karamushka, M. A. Kuznetsov, N. A. Levytska, G. V. Lozhkin, S. D. Maksymenko, N. V. Nazaruk, V. E. Orel, O. O. Rukavishnikov, L. I. Tishchuk, T. V. Formaniuk, O. V. Hrytsuk) psychological researches. At the same time, analysis of the scientific literature shows that today there is no common understanding of the process of professional burnout and its structure. And there are almost no works, in which the phenomenon of "professional burnout" was considered in relation to the specifics of activity of teachers of technical specialties of higher educational establishment. Thus, the purpose of this paper is to identify the general indicator of satisfaction with professional activity of teachers of higher technical educational establishment that affects the appearance of professional burnout syndrome.

**The main material.** To identify the attitudes of teachers of higher technical educational establishment to their professional activity we used the method of subjective scaling.

We were interested in the general final result, which determined the satisfaction with professional activity performed by teachers who participated in the study. This indicator is determined by the partial participation of (general coordinates of three vectors) three factors that make up the general satisfaction with professional activity such as "material satisfaction," "intellectual satisfaction" and "satisfaction with physical well-being." They form a sense of satisfaction with work.

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The testees were asked to mark on each of the three scales the subjective assessment regarding their attitude to their profession. So we got the general indicator for each of these scales. Due to the fact that we have chosen independent characteristics to show the attitude to professional activity ("material satisfaction," "intellectual satisfaction" and "satisfaction with physical well-being") and used nonstandardized methods, we chose the method of subjective scaling by which the scale of values of standard deviation was built. This was done in order to get a final result simultaneously by three independent scales. Processing and visual construction of the results were carried out by using computable computer program SPSS.

Assessment of material satisfaction with profession of surveyed quota of teachers of higher technical educational establishment is presented in Fig. 1.

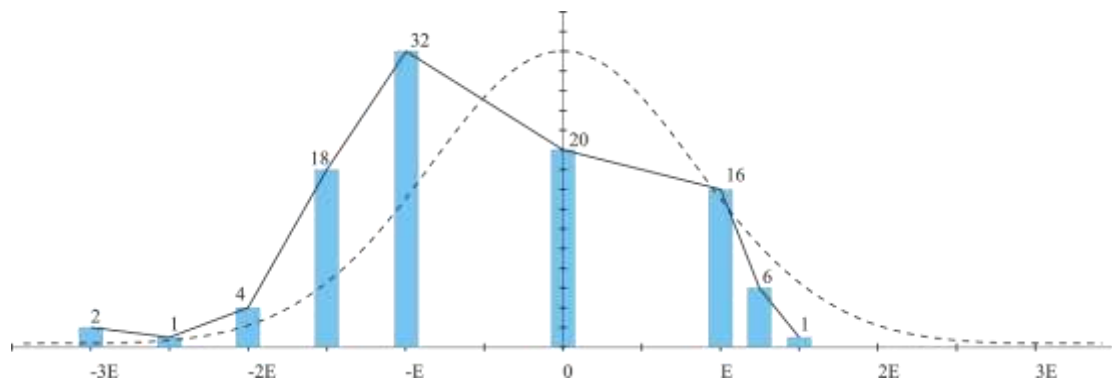


Fig. 1. Results of assessment of material satisfaction with professional activity of teachers of higher technical educational establishment

We present the obtained results in values E, where E is the mathematical constant or Euler's number or Napier's number ( $E = 2.718$ ), because standardized methodology was used. So in order these results were considered fair a normal distribution of the factor that we investigated must be shown. The principle of construction of the given interval scale corresponds to the "rule of "three sigma": about 97.7 – 97.8 % of all values in the normal distribution fit in the range from  $-3E$  to  $+3E$ " [4, p. 16–19]. The dotted line in the figure marks a perfect normal distribution.

One value  $E = 0.674 \sigma$ , where  $\sigma$  is the standard deviation in the general population, which is calculated by the formula:  $\sigma = \sqrt{\sum (x_i - \bar{x}) / (n - 1)}$ , where  $x_i$  – value chosen by each testee,  $\bar{x}$  – arithmetic mean,  $n$  – a number of testees.

On the vertical axis we marked the percentage of all contingent, who participated in the research in a total number of 741 people. Thus we see that 20% of testees chose a neutral score (0) of material satisfaction with their careers, 23% are in positive zone of material satisfaction (range from E to 2E), 50% expressed dissatisfaction with material assessment (range from -E to -2E), and 7% demonstrated complete dissatisfaction with their financial payment for the job (range from -2E to -3E). All the answers that got to the interval of the graduation on the scale with an accuracy of 5% were combined into one group, as shown in the chart.

The observed asymmetry of the empirical distribution on the standards of material satisfaction was  $A_M = 0.24$ , which is a valid relationship because its mode coincides with the boundary of deviation in the zone -E.

A is asymmetry index, which is calculated by the formula:

$$A = \frac{\sum (x_i - \bar{x})^3}{n \cdot \sigma^3}, \quad [1]$$

where  $x_i$  – value chosen by each testee,

$\bar{x}$  – arithmetic mean,

$n$  – a number of testees,

$\sigma$  – standard deviation.

The result of analysis of respondents' answers indicates that the assessment of material interest shifted toward the negative satisfaction. Asymmetry of distribution shows that 57% of testees are not satisfied with material security of their labor. Within the zone (-2E) there are 5% of teachers of higher technical educational establishment, among which 2% are in the (-3E) zone. 1% of respondents have high satisfaction with the material status. It should be noted that in the study we don't take into account wages, but only a subjective relation of payment to performed work.

Obtaining the assessment of the attitude of teachers of higher technical educational establishment to intellectual satisfaction with their careers the data which correspond to the law of normal distribution were obtained by means of subjective scaling. It's presented in Fig. 2.

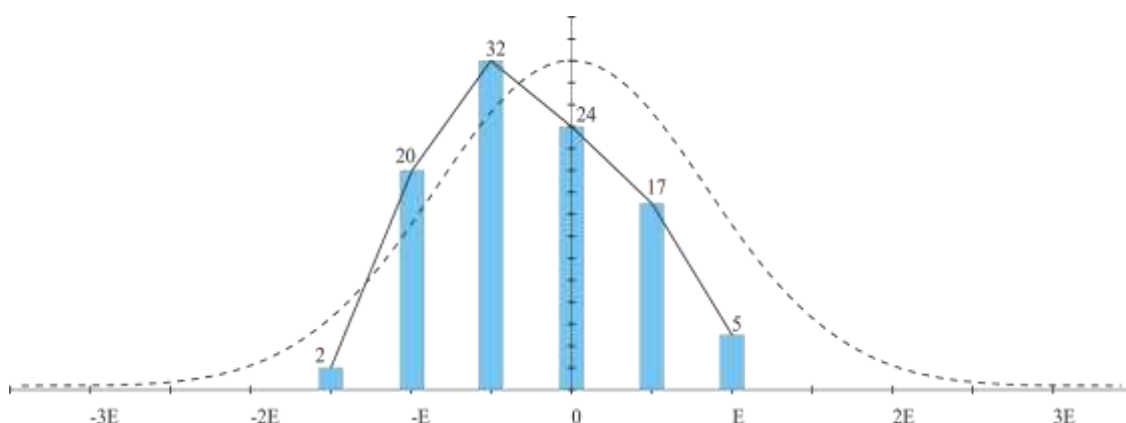


Fig. 2. Results of assessment of intellectual satisfaction with professional activity of teachers of higher technical educational establishment

As shown in the graphic representation of results, there is a slight bias ( $A_i = 0.12$ ) of parameters in the area of dissatisfaction or indifference to the profession in the distribution of teachers in higher technical educational establishment on the basis of intellectual satisfaction. Calculation of the asymmetry indicator  $A_i$  is shown in formula 1. The observed transgression of respondents' answers in the area of intellectual dissatisfaction with profession has not been thoroughly analyzed. What did exactly cause the dissatisfaction? Was that the complexity or the simplicity of activity of the respondent' abilities?

From the given above Fig. 2, we see that 24% of teachers of higher technical educational establishment chose a neutral score (0) of intellectual satisfaction with their careers, 22% of all testees are in positive zone (range E) of this factor of satisfaction with professional activity, 54% expressed dissatisfaction with intellectual assessment (range -E and -2E).

Assessing the satisfaction with physical well-being in profession, as in previous cases, the concept of dissatisfaction integrates such features as insufficient and excessive physical exercise. Received data of responses of teachers of higher technical educational establishment are shown in Fig. 3.

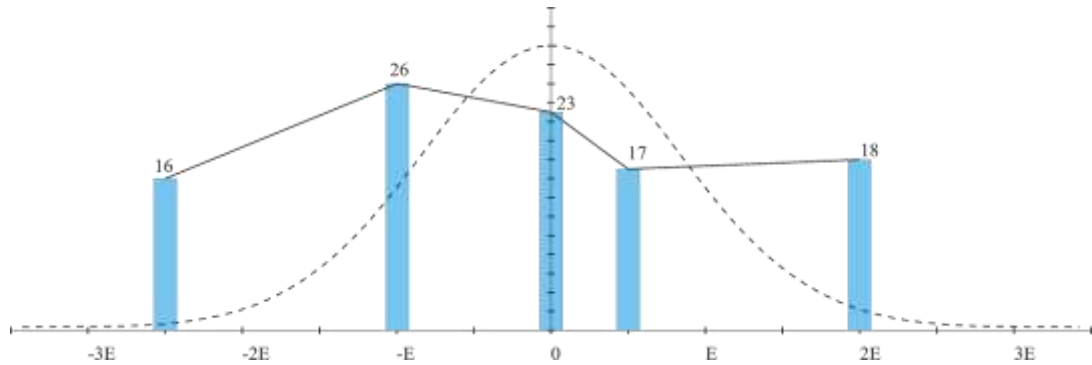


Figure 3. Results of assessment of satisfaction with physical well-being in professional activity of teachers of higher technical educational establishment

A characteristic feature of this distribution is the kurtosis of flattening  $e = 0.4$ , where  $e$  – kurtosis indicator calculated by the formula:  $e = \sum (x_i - \bar{x})^4 / (n \cdot \sigma^4) - 3$ , where  $x_i$  – value chosen by each testee,  $\bar{x}$  – arithmetic mean,  $n$  – a number of testees,  $\sigma$  – standard deviation.

Kurtosis of flattening is negative in this case. This indicates that our distribution has low and high values simultaneously. Thus, teachers of higher technical educational establishment show both positive evaluation and negative evaluation of this factor. Yet in the figure there is asymmetry of the negative evaluation of physical well-being in the professional activity of teachers of higher technical educational establishment. We can affirm that because the asymmetry indicator on the basis of satisfaction with physical well-being is  $A_f = 0.24$ . Calculations were conducted by the given above formula (1).

From the given above Fig. 3, which shows the assessments of the satisfaction with physical well-being in the professional activity of teachers of higher technical educational establishment, we see that 23% of respondents chose the neutral score (0) of satisfaction with physical well-being in their careers. In the positive zone (range E and 2E) there are 17% and 18% accordingly, relative to the total number of testees. 26% are in the negative zone, indicating dissatisfaction with physical well-being in professional activity (range -E), and 16% of teachers of higher technical educational establishment expressed complete dissatisfaction with physical well-being in their professional activity (range from -2E to -3E).

Thus, we can conclude that all three factors which were chosen by us and correspond to the general result of satisfaction or dissatisfaction with the professional activity have asymmetric bias toward dissatisfaction ( $A_m = 0.24$ ;  $A_i = 0.12$ ;  $A_f = 0.24$  accordingly). This bias of statistic indicator does not exceed the sigma deviation of normal satisfaction with professional activity since theoretical distribution of the coordinates (0, 0, 0) has index of 27% of the total number, and the real distribution that we obtained (-0.5; -0.5; -1) has 30%.

Thus, the generalized characteristic of dissatisfaction biased towards the development of negative emotions to professional activity in the selected group of tested teachers of higher technical educational establishment. Using integral characteristic, which we received after the subjective scaling of three selected scales ("material satisfaction," "intellectual satisfaction"

and "satisfaction with physical well-being") coordinates of general indicator of satisfaction with professional activity of teachers of higher technical educational establishment were defined and shown in the Fig. 4.

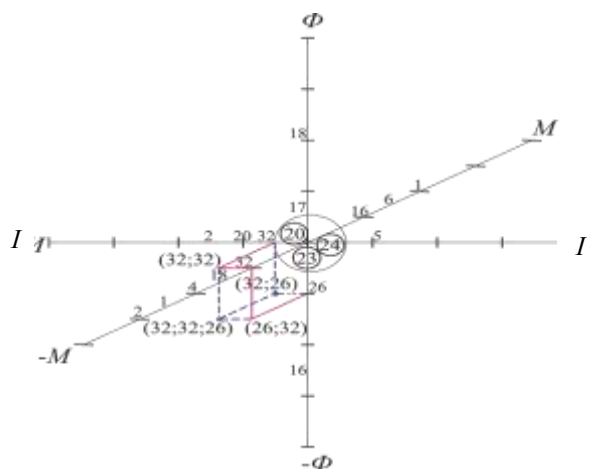


Figure 4. General assessment of satisfaction with professional activity of teachers of higher technical educational establishment

Scale (M – -M) corresponds with the results of material satisfaction; scale (I – -I) corresponds with the results of intellectual satisfaction; and scale (F – -F) corresponds with the results of satisfaction with physical well-being. Fig. 4 shows three scales on three independent features, which show the distribution of the attitude of teachers of higher technical educational establishment to their professional activity. All data are expressed as a percentage. These scales are depicted in three-dimensional space that allows us to identify the coordinates of the general indicator (32, 32, 26 accordingly) of satisfaction with professional activity. As we can see from Fig. 4, this indicator is in the negative zone.

The obtained results of examination of teachers of higher technical educational establishment can be interpreted as reduce of satisfaction with professional activity. The main reason of this, in our opinion, is the attitude to the professional activity as to a mean of resolving of personal problems, and that teachers don't have the enthusiasm for its contents. However, we should note the shift of intellectual professional satisfaction in the negative direction, which can be explained by low prestige of the profession of a teacher of higher educational establishment and technical specialties in particular.

**Conclusions and recommendations for further research.** Analysis of activity of higher technical educational establishment, labor market of engineering specialties and job opportunities in the specialty showed the presence of external factors that cause negative subjective attitude to professional activity in higher technical educational establishment. The sharp decline in demand for technicians training, deterioration of students' training to the level that is lower than sufficient for mastering the profession of technical orientation, low social security for teachers explain the downward trend in satisfaction of teachers with their professional activity. Generally this is explained by a sharp decline in demand for engineering activity and significant redistribution of activity of students toward the most popular professions, such as economists, lawyers, interpreters of European and Oriental languages.

These results can also be explained by a general decrease of requirements for high quality training in the field of professional technical activity, and also by the uncertainty of

educational content in general, and a number of technical professions that have emerged in the last decade.

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УДК 159.9:331

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### СУБ'ЄКТИВНЕ ОЦІНЮВАННЯ ЗАДОВОЛЕНОСТІ ПРОФЕСІЙНОЮ ДІЯЛЬНІСТЮ ВИКЛАДАЧІВ ВИЩОГО ТЕХНІЧНОГО НАВЧАЛЬНОГО ЗАКЛАДУ

*Статтю присвячено проблемі професійного вигорання викладачів технічних спеціальностей вищого навчального закладу. Отримані результати емпіричного дослідження можуть інтерпретуватися як зниження задоволеності професійною діяльністю за трьома незалежними характеристиками матеріальної задоволеності, інтелектуальної задоволеності і задоволеності фізичним самопочуттям. Було виведено загальний показник задоволеності професійною діяльністю викладачів технічних спеціальностей вищого навчального закладу, який розташований в негативній зоні.*

**Ключові слова:** вищий навчальний заклад, професійна діяльність, задоволеність діяльністю, професійне вигорання, викладачі технічних спеціальностей.

УДК 159.9:331

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### СУБЪЕКТИВНОЕ ОЦЕНИВАНИЕ УДОВЛЕТВОРЕННОСТИ ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТЬЮ ПРЕПОДАВАТЕЛЕЙ ВЫСШЕГО ТЕХНИЧЕСКОГО УЧЕБНОГО ЗАВЕДЕНИЯ

*Статья посвящена проблеме профессионального выгорания преподавателей технических специальностей высшего учебного заведения. Полученные результаты эмпирического исследования могут интерпретироваться как снижение удовлетворенности профессиональной деятельностью по трем независимым характеристикам материальной удовлетворенности, интеллектуальной удовлетворенности и удовлетворенности физическим самочувствием. Был выведен общий показатель удовлетворенности профессиональной деятельностью преподавателей технических специальностей высшего учебного заведения, который расположен в отрицательной зоне.*

**Ключевые слова:** высшее учебное заведение, профессиональная деятельность, удовлетворенность деятельностью, профессиональное выгорание, преподаватели технических специальностей.

*Стаття надійшла до редакційної колегії 7.012.2012*