Health-Saving Culture as the Institute of Professional Health Formation

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Abstract: Health as an element of the human capital structure is considered in the issue, which is, in turn, is the basis for the formation processes of the intellectual and creative resources in the country. Factors and conditions of health protection services are analyzed. Factors of individual health-saving behavior are determined and the necessity of health saving mental model formation in Perm region is proved. An attempt to identify functions and responsibilities for the preservation of the population health of all three subjects in the economic system: the state, firms, households is made.

Key words: Institute of health • Health saving behavior • Unfavourable working conditions • Formal and informal factors of the institute of health

INTRODUCTION

Historically all knowledge associated with health were received and related to medicine, which uses them in its practical activity. For the same reason, the presence of health is equated with the absence of disease. However, the development of science and technology as well as the introduction of their achievements in the area of experimental and practical medicine have led to a global concern for the problem of health by other scientists, who are trying to widen the idea of health, using the approaches and methods that have proven their efficiency in other areas.

In studies of health as an element of human capital, human health is determined as a state of complete physical, mental and social well-being, it inevitably becomes a factor fully defining the level of human capital return and comfort of human existence in the society. In a competitive labour market we can observe the increase of the objective necessity for the treatment of a person to his or her health as to the fundamental principle of their vital activity and competitiveness. Health is not only valuable in itself, but also affects the period of accumulation and use of other kinds of human capital including education and experience [1, p. 325]. Health acts as a resource of reproduction for the modern economy, since the effective health reproduction of the population organically included in all phases of social production. In whole it means the production of healthy generations, a more even distribution of health resource for all age cycles of human life, compensation of lack of human health reserves, more favorable environment, regular prevention and rational consumption of health, i.e. its maintenance in a state of psychological, biological and social well-being.

With a high potential of health, these factors have a positive impact on the efficiency of production, which, in turn, is expressed [2, p.185]:

• In the growth of labor productivity and improvement of production quality;
• In the improvement of the structure of economic activity and labour organization and management;
• In the improvement of material resources use and management;
• In the improvement of the managerial decisions quality, etc.

In domestic studies means and methods of estimation of health as a reproduction resource are of the scant attention.

The analysis of the various works in the field of health preservation and ways of healthy lifestyle formation (by N. Amosov, L. Anastosova, N. Baryshev, ...
I. Brekhman, D. Davidenko, V. Dubrovsky, Y. Lisitsyn, V. Markov, A. Martynenko, S. Popov, I. Smirnov, G. Soloviev and others) allows to make a conclusion that the achievements given there are mainly directed to the solution of professional-applied physical training as a prerequisite for the success of work first of all in terms of the actual physical and psycho-physiological and functional characteristics of the human body and therefore to a lesser extent the attention there is paid to the problems of character traits formation needed in modern conditions for rapid development of the market economy.

Separately in the works by S. Korovin, V. Ponomarchuk, E. Chepurnuh the necessity of reorienation of scientific research dealing with the professional-applied physical readiness to the formation of a healthy way of life as a factor of social protection and professional competitiveness of the employee of the industrial enterprise is actualized. The main specific feature here is the focus on natural biological preconditions in shaping the needs and abilities, development of the social experience and social values that have the greatest practical importance to person through work [3, p.119]. But, despite the presence of theoretical and applied researches in the field of health protection and preservation, practical measures taken in modern society and aimed at protecting the health of workers at enterprises, we can observe growth of the so called «illness» indicators and deterioration of the working life quality [4, p.321].

In modern literature there are different approaches to the study of the nature of health-saving behavior. Among them a special place belongs to the new institutional theory: it considers the firm as a set of contracts governing relationships between the owners of the resources (in this case worker’s health is considered as a resource) under conditions of asymmetric information and imperfect production.

General scientific methodological guideline of the investigation is the system approach, in which the notion of health as a multidimensional phenomenon corresponds to the model of the person as a complex system forming multilevelled unity.

**Body of the Article:** Perm region is one of economically developed regions in Russia. Its enterprises employed 1074494 people in different kinds of economic activities. One of the problems of economical development in the region is a progressive decrease in the number of labour resources, over the past six years the number of employees decreased by more than 126 thousand people. In this regard, the problem of preservation of workers’ health becomes the priority one.

Health of the working population is affected by such factors as the environment, lifestyle, heredity, the availability of medical care, working conditions.

During the analysis of problems connected with health of the working population, the working environment and conditions characterizing it are of particular importance.

According to Federal service of state statistics in Perm region 47.8 % of workers are occupied on works with harmful working conditions and the share of working conditions that do not meet hygienic standards is equal to 36.5 % [5].

Adverse working conditions negatively affect the health of workers and lead to an increase in occupational diseases [6, p.130].

From 2007 to 2011 1258 cases of occupational diseases had been registered in the region. On the basis of the data presented by Table 1 we can conclude that for the last five years professional morbidity in Perm region has fallen, but only slightly on 16.5 %. The same indicator for the Russian Federation since 2007 to 2010 had increased by 8.1%.

According to the data occupational morbidity in the Perm region annually in 1,5 - 2 times exceeds the all-Russian level. Most adverse working conditions were revealed in the following kinds of economic activities: manufacture of aircraft, metallurgy and mechanical engineering (Table 2).

The data in the table show that the most unfavorable situation was detected in terms of lighting, 35% of workplaces at the enterprises in the region do not meet this necessary requirements, in metallurgical production and production of machines and equipment the situation is much worse, the ratio is almost twice higher the average ones. Indicator of the vibration level in the production of machinery and equipment is almost twice higher than the average one in the region.

Analysis of occupational morbidity by kinds of economic activities shows that indicators at most of the companies have a positive trend (Table 3).

According to the table it can be seen that at the enterprises involved in minerals extraction occupational morbidity has decreased almost 4 times, in metallurgical production more than 4 times. However at the enterprises engaged in chemical production the number of occupational diseases has grown 5,6 times.
Table 1: Dynamics of occupational morbidity rates in Perm region and Russian Federation (per 10 thousand employees)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perm region</td>
<td>2.6</td>
<td>2.3</td>
<td>1.7</td>
<td>2.2</td>
<td>2.17</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>1.6</td>
<td>1.5</td>
<td>1.8</td>
<td>1.73</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2: Hygienic characteristics of certain types of economic activities in 2011

<table>
<thead>
<tr>
<th></th>
<th>Aerosols</th>
<th>Noise</th>
<th>Vibration</th>
<th>Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average in the region</td>
<td>5.6</td>
<td>20.8</td>
<td>16.3</td>
<td>35.6</td>
</tr>
<tr>
<td>aircraft production</td>
<td>9.2</td>
<td>21.7</td>
<td>13.5</td>
<td>67.6</td>
</tr>
<tr>
<td>metallurgy</td>
<td>2.2</td>
<td>25.5</td>
<td>19.4</td>
<td>71.9</td>
</tr>
<tr>
<td>mechanical engineering</td>
<td>10.2</td>
<td>21.3</td>
<td>28.6</td>
<td>70.8</td>
</tr>
</tbody>
</table>

Table 3: Indicators of occupational morbidity in the context of specific types of economic activity (per 10 thousand employees)

<table>
<thead>
<tr>
<th>Kind of economic activity</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>aircraft production</td>
<td>30.5</td>
<td>19.7</td>
<td>14.3</td>
<td>47.5</td>
<td>24.76</td>
</tr>
<tr>
<td>Agriculture</td>
<td>12.9</td>
<td>13.5</td>
<td>3.9</td>
<td>12.8</td>
<td>10.74</td>
</tr>
<tr>
<td>Mining</td>
<td>27.8</td>
<td>2.3</td>
<td>16.3</td>
<td>33.3</td>
<td>7.47</td>
</tr>
<tr>
<td>Metallurgical production</td>
<td>14.1</td>
<td>23.7</td>
<td>30.4</td>
<td>11.1</td>
<td>3.24</td>
</tr>
<tr>
<td>Chemical production</td>
<td>1.7</td>
<td>4.3</td>
<td>5.3</td>
<td>9.1</td>
<td>9.58</td>
</tr>
</tbody>
</table>

According to FBEH “Center of hygiene and epidemiology” in Perm region the reasons of high occupational morbidity level include the following ones:

- A large part of employers does not meet the requirements of sanitary legislation;
- There is no control over the availability of collective protection means;
- The level of harmful physical factors (noise, vibration and light) at workplaces do not meet acceptable standards;
- There is no control over the use of cancerogenous substances.

The current situation affects the set of formal and informal institutions. The formal institutions in this case include:

- Absence of effective economic mechanisms stimulating the employer to develop and introduce measures of improving working conditions;
- Extremely low level of administrative liability for the violation of sanitary legislation in the field of healthcare;
- Outdated material and technical base on the most part of the enterprises in the region;
- Lack of individual’s responsibility control for the safety rules observance and others.

Informal institute, the development of which will contribute to the reduction of occupational morbidity is a health-saving culture.

To determine the health-saving culture we should consider the categories «health» and «culture». In accordance with the Federal law of the Russian Federation Nr. 323-FZ «On fundamentals of health protection of citizens in the Russian Federation» health is determined as «a state of physical, mental and social well-being of the person at which there are no diseases and disorders of functions of organs and body systems» [7].

In the dictionary of the Russian language by S. Ozhegov culture is defined as «a set of the production, social and spiritual achievements of people...high level of smith., high development and skill» [8, p. 313]. Thus, we can conclude that health-saving culture is the ability to behave so as to ensure a high level of preserving individual’s own health and the living environment. In this regard, the urgent task of creating a model of health-saving behavior of the employee becomes very actual at the enterprise.

A study conducted by the authors of the issue in January-June 2012 at a number of industrial enterprises in Perm region, the aim of which was to study the culture of health protection at the enterprise with the subsequent development of recommendations on improvement and introduction of health-saving technologies, showed the following results.
«Be healthy» for the majority of respondents (87%) means «to be active, energetic, successful in business, to be young at any age», 12% of respondents believe that being healthy means «absence of chronic diseases». Only 20% of respondents lead healthy lifestyle, 35% believe that they do not lead a healthy lifestyle, 45% found it difficult to answer the question.

Among priority factors determining the motivation of the worker at a modern enterprise strong health takes the 4th place after income, normal working conditions and the trust and respect of leadership.

Self-assessment of the state of health of employees is as follows: only 11.5% of the respondents believe that they are healthy, feel themselves well always and everywhere, 73% of respondents sometimes feel stress and fatigue. The value of this indicator is likely determined by a high level of work intensity of the workers interviewed, as far as 85% of respondents pointed out deterioration of health at the end of the working shift. These results are confirmed by the research of Nobel Laureate Vogel, who notes that the modern level of work intensity can be compared with the intensity of slaves brigades on plantations in the middle of the XIX century [9, p.752].

85% of the respondents mentioned deterioration of their health status at the investigated companies: 58% called the great amount of work as the reasons for this, 8% believe it is due to the initially poor health and only 19 % see personal laxity as the reason of poor health. The most important in maintaining the health of workers the following factors were called (in descending order of importance): good food and work schedule (65%), healthy moral and psychological climate (54%), working conditions (50%), high salary (46%), access to medical assistance at the enterprise (38,5%), regular exercise (27%), ecology (31%), good family relations (31%), good relations with the company management (23%), good heredity (11%). Thus, we can see that the priority factors to preserve health of the working population are primarily associated with the enterprise where they work (meals, working hours, wages, conditions of work).

On average, Americans per year do not use 349 million paid vacation days. The damage to health from lack of rest during small holiday can be compared with the effects of lack of sleep. In general, people, rarely taking a vacation, at 20% are more likely to die for any reason [10, p.318].

Results of a survey conducted by the authors of the study also showed that 61.5% of employees consider their wage insufficient to maintain a healthy lifestyle and only 15.4% believe that their own laziness impedes a healthy lifestyle.

Regarding the quality of the workplace analysis of the answers gave following results: working place of 33% of employees is equipped with everything necessary, 11% of working places are not provided with raw materials in time owing to what they are forced to stand, 33% of workers are not enough provided with means of individual and collective protection, 23% of employees indicated that their workplaces are not adequately lighted and heated. 53% of respondents indicated that the state of their workplaces corresponds fully to sanitary and hygienic norms, partially - by 13%, not fully corresponds to 11%, 23% of respondents could not answer the question. The vast majority of respondents (92,3%) indicated that management of the companies do not take any measures for the prevention of diseases found as a result of periodic health checks.

In the final part of the questionnaire respondents were asked to rank measures implementation of which at the enterprise will contribute to the preservation of the workers’ health. Results were as follows:

- Regular collective socio-cultural activities - 46,2%;
- Creation of the recreation rooms at the enterprise - 57,6 %;
- Organization of medical cabinet at the enterprise – 42,3%;
- Providing employees with policies of voluntary medical insurance - 19 %;
- Partial payment of memberships at the swimming pool, fitness club, etc. - 53,8 %;
- Improvement of working conditions – 57,6%;
- Prompt provision with working clothing - 8%.

Among the most important requirements to the place of employment the overwhelming majority of respondents indicated: high salary (88,5%), favorable conditions of work, absence of physical harm and the severe working conditions (69,2%), nice and friendly staff (53,8%).

**CONCLUSIONS**

The analysis allows to draw up a number of conclusions.

- For the majority of workers the concept of health includes not only a purely physical condition, but also the condition of psychological comfort.
The differences between the results of the survey and the national standards indicate, on the one hand, the insufficient awareness of the population about the factors influencing their health and, consequently, the impossibility to carry out appropriate measures to preserve the individual’s health and the need for additional research of the factors influencing the health of the working population on the other hand.

In terms of subjective assessment of health workers should be also provided with opportunities to practice sports and to improve working conditions.

As regards objective evaluation of health statement it is necessary to raise the awareness of employees about the activities of the administration of enterprises in the implementation of health programs.

In general the results of the study indicate the low rate of health protection culture both at the level of the worker and at the level of the employer formed at the junction of production culture and labour culture, causing the need of correction the behavior of all participants of the labour process, creation of the information field for employees, motivating their involvement in the processes of health protection.

Training of employees in the basics of health care, the creation of self-preservation culture, education activity in health are open, creative processes, limited with value systems of the society and the dominant worldview principles. Formulation of the health care problem in the production process can be considered in two variants - a “minimum task” and a “task of optimum”. “Minimum task” meets the fundamental principle of medicine: «No nocere!» («Do not harm!»). Implementation of its work program includes the identification and cataloguing of factors affecting or potentially harmful (pathogenic) for the employee’s physical, mental (psychological), reproductive health and, in the future, the elimination of these factors or the mitigation of their impact on workers’ health. Thus, the solution of the minimum task with the use of health technologies is to ensure such conditions of work that do not have negative impacts on the health of all the subjects of the workflow. Health protection culture can be considered as an alternative to the health threats from all possible sources in one way or another connected with the labour process. Criterion of health-protection qualities of the labour process in providing protection from pathogenic factors is the presence or absence of a deterioration of workers’ health, which is in apparent connection with the impact of such factors. If you restrict the work of the enterprise in the sphere of health protection only with the minimum task - the protection of the worker against the harmful effects – in this case only a small part of the labor potential of the enterprise will be involved in the interests of the health of workers. This approach in our opinion does not meet the strategic principles of health protection and does not lead to the achievement of the objectives of the system. Efforts in this area should not only be limited by filtering impacts directly associated with the labour process. In accordance with this conclusion the understanding of health-protection culture appears to us to be the “task of optimum”, including solution of the “minimum task” as well as formation of physical, mental, moral health, education of culture health, effective motivation for maintaining a healthy lifestyle of workers. In this case the definition of health-saving technologies as a set of technologies created not only to protect the health of employees from the adverse negative impacts of factors of the industrial sphere, but also to promote the education of workers of culture of health seems more correct.

Summary: The country's economic development is impossible without rational management of public health as a key economic resource in the innovative economy, the economy based on knowledge. Health management can be realized both through investments in it and through the formation of the appropriate level of health culture at the level of the individual and at the level of the enterprise or the state. From the point of view of the modern economy, we can conclude that in the short term to a greater degree, the responsibility must rest with the enterprise, forming the basis for the implementation of health policy in the framework of the new mental model, in which health-supporting culture should become one of the elements of economic culture and healthsaving will be one of the dominant values of the modern Russian society.

REFERENCES