Monitoring of Working Conditions and the Nature of their Influence on Health of Students and Academic Staff

Mikhail V. Vinichenko, Andrey V. Kirillov, Elena V. Frolova, Olga V. Kaurova, and Sergey A. Makushkin

Russian State Social University, Moscow, RUSSIA

The relevance of the research is conditioned by the need to win the competition struggle by certain organizations and area in general. Education has recently become very popular for the training of highly professional staff. However, achieving this goal is possible by means of creation of favorable working and learning conditions, maintaining health of the teaching staff and students. Therefore, the present article has the purpose to reveal the issues of monitoring of working conditions and the nature of their influence on the health of students and academic staff of Russian State Social University (RSSU). The main approach, implemented in the study has been the system one, giving the opportunity to study the problem in the logical relationship. Also, there has been used the method of comparative analysis, based on the comparison of the results of content analysis of documentary data of the university and sociological survey. The paper reveals the nature of the impact of working conditions on the health of students and teaching staff. There is a dependence of the increase in the incidence of the academic staff and the duration of the university renewal. Scientific and methodological recommendations for the formation of working and learning conditions, favorable for health of students and professors have been working out.

Introduction

Urgency of the problem

Difficult economic and foreign policy environment make it necessary to use the existing resources to maximum effect (Erdyneeva et.al, 2016). Human resource serves as a basis for achieving competitive strengths. At the same time, competent leaders comprehend and take reasonable actions to create supportive environment for the development of the human capital, the realization of employees' potential in the course of their work (Zaitseva et.al, 2015).

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Dynamically changing conditions of market environment, the shortage in highly professional personnel, inadequate level of the availability of basic social benefits and services for citizens determine the need for searching for new strategies and mechanisms, ensuring the competitiveness of business processes, the development of human capacity, the formation of effective system of motivation (Frolova, 2014; Olkhovaya et. al, 2016). In the sphere of education it is important to create favorable and safe conditions not only for the professional experience of the educational organizations' staff, but also for students' training (Ilina et .al., 2016; Kataeva et. al, 2015; Ilina et al., 2015). One of the core elements, the foundation of the human effectiveness is his health (Vinogradova et. al, 2015). Therefore, the most important indicator, characterizing the existing conditions of labor and learning is the health condition of staff and students of the university. This is especially important in the period of reforming in the field of education and in particular university.

In the last few years in the RSSU there have been the transformation of various kinds, including the staff, aimed at improvement of the university effectiveness. They crucially affect all personnel of educational organization. Consequently, the issue of the creation of favorable conditions for student learning and professor s' labor is attached great importance. Constant monitoring of their condition has been conducted, and measures, aimed at improvement of living conditions in the high school have been taken. Previous studies on the creation of favorable and safe learning and working environment generated interest of scientific community, other universities of the country, as well as the leadership of a number of Russian ministries. As a result, Ministry of Education and Science of the Russian Federation recommended to analyze the state of the employment terms of university staff and student learning. Herewith, the parameters, by means of which it is advisable to get the data in the framework of the matter of interest were specified.

Literature Review

The issues of health planning, creation of favorable conditions for living and performing of employment and educational functions have recently been given much attention by both domestic and foreign researchers. Currently, there is running a search for the optimization of conditions for sustainable maintenance and health gain.

 RSSU students and their children are representatives of different professions of civil service and business sector, thus the study on the working conditions and the nature of their influence on health of students and academic staff passes through the analysis of a large and diverse array of literature, dedicated to this subject.

The issues of how do the conditions of work in various office units influence the health of employees and job satisfaction have been brought up in the work of C. B. Danielsson and L. Bodin (Danielsson & Bodin, 2008). M. Rashid and C. Zimring (Rashid & Zimring, 2008) have conducted a research in the framework of the problem of protection of office workers health. The impact of noise on working efficiency has been reviewed in their work by (Kristiansen et. al, 2011).

The extreme nature of the police work and policemen health-sustaining measures has been thoroughly studied by (Turnbull & Wass, 2015). S. Tombs' work is also of a special interest. It represents the research on the issues of
preservation of health and safety of employees and employers, abidance by workplace hygiene in the chemical industry (Tombs, 1991). The problems of the workplace impact on the health of trucker have been raised in the paper of (Lemke & Apostolopoulos, 2015). The questions of health protect of medical staff have been taken up in the research works of (Picakciefe et al., 2015; Horrigan et al., 2013).

The nature of the influence of labor in the uranium mines on the health of employees of several factories has been reviewed by (Madsen et al., 1996).

The co-relation of spirituality, religiosity and health has been studied by (O'Connell & Skevington, 2007). S. Edwards and M. Gabbay (Edwards & Gabbay, 2007) have observed the challenges, related to long-term absence in the workplace due to health problems.

A range of researchers have been studying the state of health in educational institutions (Alexandropoulou et al., 2010; Knauer et al., 2015; McBride & Kanekar, 2015). The influence of students' time-management on students' health has been examined in a work of (Kirillov et al., 2015). Their own approach to the matter of professional stress has been offered by (Cameron et al., 2016).

The issue of health maintenance in the course of the reforming of the university has partly been considered in the paper of (Kirillov et al., 2015).

In interesting gender perspective the measures for health gain of rural women, suffering from chronic disease have been investigated by (Winters et al., 2006). I. S. Harvey and L. Cook have chosen the possibilities of elderly women to preserve and maintain their health as the subject of research (Harvey & Cook, 2010).

A pressing issue of preservation, especially of the mental aspect of health of employees, living in the suburbs of large cities has been considered by (Feng & Boyle, 2013; Oliffe & Han, 2013) have continued the theme of mental health, but only of men, involved with the working conditions, leading to depressions and suicides. Of great interest is also a comprehensive analysis of (French et al., 2004) on the problems of psychological and stress stability of staff and the possibility of their improvement by means of the active use of flexible activity timetable.

In general, there is a good many literature on this problem, however, it has not been ever viewed by anyone in such a form.

**Materials and Methods**

According to the Ministry of Education and Science of the Russian Federation interest in the solving of this problem, a group of authors has developed a procedure of identification the state of working conditions and the nature of their impact on the health of students and teaching staff during the university reforming. It includes a system of methods and approaches, providing a means of comprehensive study of the problems of protection of health of students and personnel during their activities at the university, especially in the course of the continuous reforming in the country, as well as in the sector of higher education, at the university. First of all, general scientific methods have been implemented. There has been a wide use of matching method, visual and system analysis. Content analysis had enabled to explore and appraise the state of the local regulatory framework and reporting documents. Sociological surveys,
overt observation, interviewing have served as a basis for the empiric data acquisition. It has permitted to identify the position of university staff, business partners and students on the issues, related to the problem of preservation of health in the course of performing employment functions and training.

As the estimated figures have been selected those, recommended by the Ministry of Education and Science of the Russian Federation: the analysis of the state and maintenance of classrooms and academic buildings; utility spaces; socio-cultural and health purpose; fire fighting measures; the presence of the technical rules and regulations and other documentation.

Statistical methods have enabled to obtain the data, required for system analysis and reasoned justification of the results and methodological recommendations.

The research was carried out in June-July 2016. For monitoring and analysis in the course of the study, specialists and experts in the field of human resources and working environment engineering, positively influencing on the health of the staff and students of the university were involved.

The total number of participants amounted to 180 respondents. The selection of study groups included lecturers from 5 departments, including management, economics, communicative management (13 respondents), the staff of technical services (8 respondents), administrative-and-managerial staff (10 respondents), representatives of other organizations, collaborating with RSSU (59 respondents), students of 14 training programs (90 respondents), including human resources, state and municipal management, tourism, psychology, conflictology, advertising and others. The respondents assessed the state of health, the conditions of working and learning by means of survey and questionnaire.

**Results**

In the course of sociological survey it was found out that 66% of respondents viewed the state of classrooms and academic buildings as favorable, while 23% appraised it as unfavorable (fig. 1.).

![Figure 1. The evaluation of the state of classrooms and academic buildings](image)

Analysis of the data, obtained from various categories of respondents allowed to state that among the number of administrative-and-managerial staff only 50% appreciated classroom fund and the state of academic buildings as...
positive, and 20% as negative. Only half of the representatives of technical services staff estimated this indicator as favorable. Teaching staff of the university was more categorical in the evaluation - 53% of respondents viewed the state of classrooms and academic buildings as unfavorable. 69% of students estimated it as favorable. The highest rate on this indicator was given by the representatives of other organizations, cooperating with RSSU - 73% of respondents inclined in favor of a favorable evaluation.

To respondents point of view, utility spaces are kept in a worse condition. 64% of the respondents estimated it as favorable, 21% unfavorable and 15 % fountain it difficult to answer. (Fig. 2)

![Figure 2. Maintenance of utility spaces](image)

The structure of evaluation of utility spaces slightly differs from that of the classrooms and academic buildings. 70% of administrative-and-managerial personnel, 50% of technical services staff, 77% of the academic staff, 62% of students and 66% of the representatives of other organizations positively estimated the present indicator.

The objects of socio-cultural and health purposes are, as a whole, in a positive evaluation zone - 73%, and only 9% viewed it negatively (fig. 3).

![Figure 3. The objects of socio-cultural and health purposes](image)
The objects of socio-cultural and health purposes were most highly estimated by the academic staff - 92% positively and 8% found it difficult to answer, and representatives of other organizations - 85% appraised them as favorable (12% - neither agreed or disagreed). Then, there was administrative-and-managerial staff - 70% estimated positively and 20% - negatively. 64% of students gave a fa praise and 11% estimated the objects of socio-cultural life of university as unfavorable; representatives of technical services personnel - 62% positively and 25% - negatively.

The majority of the respondents (72%) gave an affirmative replay to the question "How do you estimate the fire fighting measures?" (Fig.4)

Figure 4. Evaluation of the fire fighting measures

The opinions of the respondents on the matter of evaluation of the fire fighting measures were divided, but all exceeded the edge of 50% of favorable conditions: administrative-and-managerial staff - 90%, teaching staff - 77%, technical services workers - 75%; representatives of other organizations - 66%, students - 72%.

Among all parameters, subjected to the estimation of the respondents, the most problematic one turned to be the presence of the necessary technical rules and regulations and other documentation. Less than half, 48% of the respondents, noted this parameter as positive, 11% considered it as a negative and 41% of the respondents found it difficult to answer (fig. 5).
Figure 5. The analysis of the presence of technical rules and regulations and other documentation

The representatives of other organizations and administrative-and-managerial staff (39% and 40% of positive rates, respectively) viewed the system of documentation supply as underdeveloped.

The revealing of interrelation between working and learning environment was conducted through the comparison of statistical data, obtained in the course of the content analysis of reporting documents of RSSU personnel department and other structural subdivision of the University, and the results of the sociological survey.

The analysis of the data, obtained during the study of sick leaves of RSSU employees allowed to state that technical services staff suffered from diseases most of all - 224 people (on the grounds - 184 - disease, injury (not including injury at work), another state, socially significant disease; 21 - pregnancy leave; 19 - care for sick adult family member). Then come the academic staff - 51 people (on the grounds - 29 - disease, injury (not including injury at work), another state, socially significant diseases; 19 - pregnancy leave; 3 - care for a sick adult family member) and administrative-and-managerial staff - 46 people (on the grounds - 31 - disease, injury (not including injury at work), another state, socially significant diseases; 9 - pregnancy leave; 6 - care for a sick adult family member).

During the social research, the evaluation of the changes in their health in the course of performing employment and educational functions was carried out by respondents on the basis of the last year data. Analysis of the present survey data revealed that more than half of the respondents (62%) fell ill just for once during the year (Fig. 6).
Teaching staff (92%) and representatives of other organizations (80%) were sick most of all. Technical services staff (37%) and administrative -and-managerial personnel (40%) suffered from diseases less than other respondents. Students' percentage was divided equally.

The main diseases were A.R.V.I. (50%) and influenza (21%). Besides, dysentery (13%), allergy (11%) and sore throat (4%) were also mentioned (Fig. 7).

A sickness affected the professional and learning experience of the respondents in different ways. Half of the respondents could not assess the nature of the impact of the disease on the performing their official and educational duties. 41% of respondents noted the degradation, and 9% of respondents answered positively (Fig. 8).
Content analysis of statistical data of RSSU personnel administration allowed to establish that during the researched period teaching staff to the extent of 844 people, administrative-and-managerial staff - 633 people, technical services staff - 163 people passed the medical examination with the view to the possibility of work in educational institutions of all types and species, as well as children's organizations, not realizing learning activity, and the impact of broadband spectral range from PC (technical services staff - 231 people). In addition, administrative-and-managerial and technical services staff were passing a number of special examinations on the ability to perform official duties, including the work of the medical staff of prevention and treatment facilities, as well as maternity homes (departments), children's hospitals, children's polyclinics, children's clinics, neonatal premature and pathology units. No other documentary data, supporting the implementation of preventive measures, was obtained.

In the course of the sociological survey, representatives of other organizations and students estimated the disease-prevention measures of the university, in general, positively (47%), but with a significant percentage of respondents, who found it difficult to answer (38%) (Fig. 9).

Administrative-and-managerial staff (80%) and technicians (62%) spoke highly of the prevention measures. Less than 50% level of positive estimation was observed among the students (43%), representatives of other organizations (44%) and academic staff (46%). The problem of injuries was estimated quite
seriously. 24% of the respondents suffered an injury during the study period (Fig. 10).

![Bar chart showing injury distribution](image)

**Figure 10. Did you suffer an injury?**

Teaching staff (31%) and representatives of other organizations (36%) suffered an injury most of all, least of all - students (16%).

**Discussion**

The study on the nature of the influence of working conditions on the health of students and academic staff has allowed to establish that the present problem is within the field of RSSU management view. The data of the sociological survey confirmed that the state and maintenance of classrooms and academic buildings; utility units; objects of socio-cultural and health purposes; fire fighting measures; availability of the necessary technical rules and regulations and other documentation, generally, were estimated by the respondents as favorable. The leading indicators are such as the objects of socio-cultural and health purposes (73%) and fire fighting measures (72%). The state and maintenance of classrooms and academic buildings (66%) and utility spaces (64%) were also estimated positively enough. Document support of management turned to be in a worse situation - only 48% of the respondents opted for the creation of favorable conditions by this indicator. Herewith, it should be noted, that teaching staff is not satisfied with the working conditions. More than half (53%) of the respondents believe that the classrooms and academic buildings are in need of improvement. This has an adverse affect on the labor productivity of the professors and their health. Dynamics of development of teaching aids, information technologies, development speed of the faculty and students of innovation in higher education opportunities of the Russian Ministry and the university on the technical equipment of classroom fund.

Disease prevention is being held in the university, but it has not acquired a system character. It is recorded document-wise only in a limited number of documents and is of distinctive character. The personnel and students themselves select the forms and means of preventive measures for disease prevention. This is confirmed by the evaluation of the objects of socio-cultural and health purposes. For example, the teaching staff (92%) speaks positively of
these objects, but in view of the workload does not have the possibility to use them to full extent. In the course of the study discrepancy of official statistics and the results of sociological survey on the issue of the frequency of the staff medical disorder.

Conclusion

According to the investigation, a high incidence of disease of the teaching staff is associated with a long-term reforming of the university due to the optimization of the number of the professors, substantial increase in educational and scientific load, high dynamics of the educational process and complexity of implementation of preventive measures in such conditions.

Availability and good-conditioned maintenance of the objects of socio-cultural and recreational purposes of the university do not contribute to the improvement in health in its entirety, as the employees are not always able to use their services due to the overflow at work.

Writing staff expressed thanks to the senior executives of RSSU for the opportunity to conduct a sociological survey, the Head of RSSU HR G.A. Punin and hospital administrator of RSSU polyclinic T.V. Kotova for the provision of objective statistical data on disease prevention, medical examination and formalized disablement due to illness, as well as the initiative group of students, collecting and providing the data on the research.

Teaching staff consider that they were sick repeatedly. However, it was not reflected in a written form. The present state of affairs is explained by the fact that not infrequently the diseased lecturer did not take a (had no opportunity to take) a sick list, as each had big teaching load and no one to replace them. Professional, patriotic feelings forced the academic staff to give classes being ill. This approach had an adverse effect on teachers' health, as well as contributed to the viral shedding in the university.

At the same time, a significant difference in the evaluation of the technical services staff disease frequency was found out. According to the survey, representatives of this group suffered from disease arguably rarely (37%), but as reported by the statistics of the content-analysis of the documents - suffered more often than others (for example, 4 times oftener than teaching staff). It is accounted for the fact that technical services staff is not so tightly pegged to the main process of the university- educational and can afford to be absent from work officially in relation to the disease.

The analysis of statistical data on the illness structure, obtained from official documents, demonstrates that the majority of the representatives were disabled due to the illness, injury (not including injury at work) and other state and socially significant diseases. Separately raised a question of fire fighting measures. Taking into account the close collaboration with the authorities of the Ministry of Emergency Situations of Russia, RSSU pays much attention to this parameter. The whole territory of the university is placed with TV panels, continuously informing all people on the sequence of activities in complex situations, in the event of fire and measures for its prevention. Therefore, a greater part of the respondents, especially responsible for this aspect
administrative-and-managerial staff, positively assess the complex of fire fighting measures.

Based on the results of the research conducted, authoring team has worked out the scientific and methodological recommendations on the formation of working and learning conditions, favorable for health of students and university staff.

1. Regularly monitor the working and learning conditions, the state of personnel and students health.

2. Actively promote a healthy lifestyle.

3. Optimize academic and scientific load on the teaching staff to the benefit of preservation and gain in health of the professors - main labor unit of the university.

4. Develop a self-management of the university staff and students for rational time-management and planning of preventive and health-improving measures during the year, semester, month.

5. Take disease prevention measures systematically and purposefully.

6. Plan and continuously carry out sporting, cultural and recreational activities with the maximum involvement of university staff and students.

7. Create medical station, equipped with blood pressure monitor, thermometers and others.

8. Equip relaxation rooms.

9. Provide the RSSU site with the block, reflecting the preventive and recreation activities and the state of health condition of staff and students of the university.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Mikhail V. Vinichenko is doctor of historical sciences, Professor, Russian State Social University, Moscow, Russia.

Andrey V. Kirillov is doctor of historical sciences, Professor, Russian State Social University, Moscow, Russia.

Elena V. Frolova is doctor of sociological sciences, Professor, Russian State Social University, Moscow, Russia.

Olga V. Kaurova is doctor of economic sciences, associate Professor, Russian State Social University, Moscow, Russia.

Sergey A. Makushkin is PhD, associate Professor, Russian State Social University, Moscow, Russia.

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