Hygienic Assessment Of Working Conditions And Their Impact On The Health And Performance Of Accountants

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ABSTRACT

This article analyzes the impact of microclimatic conditions, timing and working posture on the performance of employees in the field of accounting. The study evaluated the parameters of the microclimate, including air temperature, speed of movement and humidity; hygienic assessment of the working position was carried out. In addition, the work process was timed, and the subjective feelings of employees were studied – the perception of thermal comfort, general well-being and the level of fatigue at the end of the working day. As a result of the conducted research, it was revealed that the working conditions are satisfactory.

Keywords: accountants, fatigue, work schedule, microclimate, working position

Working conditions play a key role in ensuring the productivity and health of workers in various professions, especially in areas that require high concentration and knowledge work, such as accounting. The microclimate, which includes parameters such as air temperature, humidity, and speed of movement, has a direct impact on the physiological and psychological state of employees. According to Uzbek standards, Sanitary norms and rules 0355-18, optimal microclimate parameters must meet the requirements for ensuring comfortable working conditions, which contributes not only to increasing productivity, but also to reducing stress and fatigue [4].

In addition, the organization of the work process and correct posture are important for preventing occupational diseases and improving work efficiency. Incorrect working posture can lead to back and neck pain, as well as the development of chronic diseases of the musculoskeletal system. According to modern research, maintaining proper posture and ergonomic conditions helps to reduce physical strain and increase the overall performance of employees [5]. In accordance with SanPiN 0355-18, proper organization of the workplace and compliance with hygiene standards are also important for accounting employees in order to prevent occupational diseases. [1; 6].

An important aspect is also the timing of the working day, which allows you to accurately determine which activities take the most time and how this affects performance. A clear organization of working hours helps to optimize the work process and improve the overall condition of employees, which is important for preventing mental fatigue and improving the quality of work. In Uzbekistan, according to the Labor Code, the length of working hours and breaks should be balanced to ensure the health of employees [2; 3].

The aim of this study is a hygienic assessment of the working conditions of accountants-an analysis of the impact of microclimatic conditions, timing and working posture on the performance of accounting workers, as well as an assessment of their subjective feelings,

including thermal comfort, well-being and the level of mental fatigue during the working day.

Materials and methods: The study involved accountants of both sexes aged 25 to 55 years. The study of microclimate parameters was carried out: temperature, humidity, air velocity, working day timing was carried out and indicators of the working posture of the subjects were studied. To analyze timekeeping, we used the continuous method, which recorded all types of activities and their duration during the working day. Thermal comfort was assessed through a survey of employees about their subjective feelings. The study involved 50 accountants working in the city of Tashkent.

Results of the study: during time-lapse studies, it was found that employees spend 65.13% (5.2 hours) of their time during an 8-hour working day on main work, 6.2% (0.496 hours) on auxiliary work, the remaining 26.87% (2.15 hours) on distractions and 2.1% (0.144 hours) on breaks and pauses. During the study of the microclimate, it was found that the average air temperature in the working rooms is 24°C, relative humidity is 34%, and the air speed is 0.27 m/s. When conducting the survey, employees rated their state of health by an average of 12 points, which corresponds to a state of mediocre well-being. The question about heat sensation was rated at an average of 2 points, which indicates a comfortable environment.

When evaluating the working posture, the following was determined (the standards for the angles of the sitting working posture are given in parentheses):

- wrist angle averaged 180° (170-190°)
- elbow angle-94° (80-110°)
- hip angle-91° (85-100°)
- knee - 105° (95-120°)
- ankle angle-93° (85-92°)
- the angle of deviation of the neck from the vertical axis – 22-24° (10-25°)
- angle of deviation of the shoulder from the vertical axis-16.25° (15-35°)
- the torso deflection angle from the vertical is 16° (15-25°).

According to the results of studies of mental fatigue according to the Schulte table, which were conducted before and after the working day, it was determined that the distribution of attention with black numbers before work averaged 45.6 seconds, with red numbers 49.8 seconds, and after work these indicators were with black numbers - 46.8 seconds and with red 59.2 seconds. The interleaving of numbers took an average of 126 seconds.

Conclusions: Timekeeping showed that the main work takes 65.13% of the time, and 26.87% – distractions, which indicates a significant cognitive load. The microclimate turned out to be comfortable (24°C, 34% humidity, 0.27 m / s), and the state of health was estimated at an average of 12 points. The working posture mostly corresponded to the norms, but the angle of deviation of the neck (22-24°) approached the upper limit of the norm. A study of mental fatigue found an increase in task completion time after work, especially with red numbers. However, attention switching (20.08 seconds) turned out to be better than average (the norm is 40 seconds), which indicates good adaptation. In general, the working conditions are satisfactory, but there is a mental overload, which requires optimization of the working mode.

References:

1. СанПиН РУз №0324-16 «Санитарно-гигиенические нормы микроклимата производственных помещений», Ташкент, 2016
2. СанПиН РУз №0224-07 «Санитарные правила и нормы при работе на персональных компьютерах, видео дисплейных терминалах и оргтехнике», Ташкент, 2007
3. Юшкова О.И. Профилактика неблагоприятного влияния трудовой деятельности на функциональное состояние работников умственного труда. Медицина труда и промышленная экология. 2012; 4: 13-9.
4. Рахимов, Б. Б., Садирова, М. К., & Ниязова, О. А. (2024). ПРОГРЕСС В МОНИТОРИНГЕ КАЧЕСТВА АТМОСФЕРНОГО ВОЗДУХА В УЗБЕКИСТАНЕ: ТЕХНИЧЕСКИЕ ДОСТИЖЕНИЯ И ИХ РОЛЬ В

УПРАВЛЕНИИ ЭКОЛОГИЧЕСКОЙ ОБСТАНОВКОЙ. *Conferencea*, 18-20.
5. Рыбальченко, И. П. (2008). Гигиенические аспекты микроклимата рабочих помещений. М.: Медицина.
6. Гаврилова, Н. К. (2012). Организация труда и профилактика усталости на рабочем месте. М.: Труд.
7. Ниязова, О. А., Ахмадалиева, Н. О., Валиулин, Р. И., & Болтаев, М. М. (2022). *Comperative assessment of nutrition of university students of medical and non-medicdl profile* (Doctoral dissertation, European multidisciplinary journal of modern science).
8. Ниязова, О., & Саломова, Ф. (2022). Studying changes in the health state of school children arising from incorrect fiting.
9. Ниязова, О. А., Саломова, Ф. И., & Ахмадалиева, Н. О. (2022). Изучение изменений состояния здоровья школьников возникающих при неправильной посадке.
10. Ниязова, О. А., Мирсагатова, М. Р., & Абдусатторова, С. Ш. (2023). Изучение фактического питания студентов медицинских, технических институтов. International Multidisciplinary Conference.
11. Новикова И.И., Ерофеев Ю.В., Стороженко А.Е., Бережной В.Г. и др. // Омск, 2017.
12. Саломова, Ф. И., Ниязова, О. А., & Мирсагатова, М. Р. (2022). Гигиеническая оценка расписания средних классов Общеобразовательных школ наманганской области.
13. Хайитов, Ж. Б., Бурибоев, Э. М., & Ниязова, О. А. (2023). ИССЛЕДОВАНИЕ И ОЦЕНКА ФАКТИЧЕСКОГО ПИТАНИЯ ДЕТЕЙ И ПОДРОСТКОВ СПОРТСМЕНОВ. *Academic research in educational sciences*, *4*(ТМА Conference), 449-454.
14. Niyazova, O. A. (2018). Study of the influence of physical education on the functional state of the organism of pupils of comprehensive schools. *Medical Scientific Bulletin of Central Chernozemye (Naučno-medicinskij vestnik Central'nogo Černozem'â)*, (73), 54-58.