

General Assessment of the Dental Condition of Employees at Manufacturing Enterprises (Ghost of Literature)

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In recent decades, more and more attention has been paid to assessing the dental condition of workers in manufacturing enterprises, since dental diseases can have a significant impact on their overall health, performance and quality of life. To understand and improve this problem, an extensive literature review is conducted, which includes research results, publications and expert opinions on the topic.

During the review of the literature, several key aspects related to the assessment of the dental condition of workers in manufacturing enterprises were identified. Firstly, factors affecting the dental health of workers, such as working conditions, including exposure to chemicals, increased vibration, noise and dust, were studied. An analysis of the relationship between workloads, stress and dental problems was also carried out [Fradkina Yu. D. 2021].

Secondly, various methods of assessing the dental condition of employees used in research and clinical practice were considered. This includes a clinical examination of the oral cavity, assessment of the condition of teeth and gums, X-ray and laboratory studies, as well as the use of standardized questionnaires and questionnaires. Each of these methods has its advantages and limitations, and their choice depends on the research objectives, available resources and the context of the production environment [Molvinskikh V. S., 2017].

The third aspect is the relationship between the dental condition of employees and their overall health. It has been revealed that dental problems can be associated with diseases such as cardiovascular diseases, diabetes, respiratory diseases and even cancer. This highlights the importance of maintaining good dental health in employees for overall well-being and productivity.

Many studies address the issues of prevention and improvement of the dental condition of employees. Various programs for the prevention of dental diseases were considered, including oral hygiene training, regular medical examinations and access to dental care at work. The effectiveness of such programs depends on their proper implementation, the involvement of dentists and cooperation with manufacturing enterprises [Dvydova N.S., Titov I.G., 2019].

In general, a review of the literature on the assessment of the dental condition of workers in manufacturing enterprises highlights the importance of this problem and the need to take it into account when developing measures to preserve and improve the health of the workforce.

Further research and practical initiatives should be aimed at developing effective strategies for the prevention and treatment of dental diseases in the workplace, as well as at raising awareness and knowledge of workers about the importance of dental health and methods of its maintenance [Ishchenko E.S., Brusnitsyna E.V., Zakirov T.V., 2022].

Many researchers provide a basis for further research in this area and contribute to the development of practical recommendations for improving the dental condition of workers in manufacturing enterprises. This is an important step towards creating a healthy and productive workforce that can effectively cope with the demands of a modern production environment.

The Republic of Uzbekistan is witnessing the rapid development of industrial enterprises, many of which are concentrated in areas close to cities.

The use of harmful chemicals in gypsum production operations certainly poses a problem of pollution of the environment and workplaces. These compounds can have toxic effects on the human body. Therefore, the study of the environmental impact on the general state of human health, including the condition of the oral cavity and teeth, is important. This analysis makes it possible to effectively respond to potential risks and develop adequate approaches to the treatment and prevention of dental ailments among gypsum production workers. [UNECE, Geneva, 2020].

One of the main tasks of the health care of the Republic of Uzbekistan is to maintain healthy lifestyle, as well as to ensure safe working conditions for the working population. However, industrial production may contain adverse biological, chemical and physical factors that can negatively affect the health of workers [Adilov K., Adilova Sh., 2018].

Among the occupational factors that can lead to diseases of the oral cavity, intense noise, vibration, gases and aerosols of the air, physical activity and contact with mining dust should be noted. These factors can cause caries, periodontitis, inflammatory processes in the oral cavity, as well as diseases of the nose and palatine tonsils. This is an urgent problem for mining workers, and effective prevention programs need to be developed [Anifeev T.A., 2003].

At gypsum-producing, cement and other enterprises, the level of dust formation can exceed the maximum permissible concentrations by several orders of magnitude, even when using personal protective equipment and new technological processes. This can lead to the development of occupational diseases such as pneumoconiosis, mining disease and others [Vysochin V.I., 1991].

Working in conditions of constant vibration, which is often found in the mining industry, can cause vibration sickness. It can negatively affect all body systems, such as cardiovascular, urinary, respiratory, and others. This can lead to impaired blood circulation, metabolism and immunity. [Rudenko A.Ya., 1995].

Therefore, it is necessary to take measures to protect the health of workers in mining and gypsum-producing industries, including the creation of conditions for safe work, the use of personal protective equipment, as well as the development of effective programs for the prevention of occupational diseases, especially oral diseases and vibration disease. [Kovulchuk L.V., 2000]

According to modern research, generalized periodontitis has many causes, including violations of the microbiocenosis of the oral cavity, insufficient antioxidant protection and disorders of microcirculation in periodontal tissues. Vascular endothelial dysfunction also plays an important role in the development of microcirculation problems in periodontal tissues, which can lead to ischemia. Chronic epithelial damage is also considered one of the key factors in the development of generalized periodontitis. [Ivanov V.S., 2001]

Studies have shown that with an increase in work experience, employees of mining enterprises deteriorate the condition of the oral cavity in terms of hygiene. They often encounter disorders of the ligamentous apparatus, which can lead to problems with tooth retention. Bone resorption (destruction) is also observed, which negatively affects the bone support of the teeth. Generalized periodontal problems, including inflammatory and dystrophic processes, also increase with increasing work experience at the enterprise. The results of capillaroscopy also showed that these workers have a spastic vascular condition, narrowing of capillaries, slowing of blood flow and clouding of the background. [Kovulchuk L.V., 2000]

Research by S.A. Gafforov shows that dental diseases, especially dental caries, are widespread among workers of textile production workshops at the Bukhara Textile Mill. An impressive 93.8% of workers experience dental caries, and the disease intensity is 13.3. It is noted that this disease is more common in women than in men. However, caries affects not only women, but also men, which indicates the widespread impact of adverse working conditions on the health of workers.

Interestingly, workers who have worked at the plant for longer have an increased risk of caries. In addition, somatic diseases, which may be related to working conditions, also increase the likelihood of

developing dental problems. The reason for this may be the long-term impact of adverse factors, including temperature, humidity and air pollution, on the body of workers.

In developing industrial regions, priority should be given to protecting public health, including the health of the dental system. This requires additional research to better understand the mechanisms of harmful factors affecting workers' health and to develop and implement measures to improve working conditions and prevent dental diseases. Improving working conditions and preventing dental diseases will create a healthier and more efficient workforce and improve the overall health of the population in the region. [Gafforova S.A., 1999].

In one study, O.I. Filimonova studied dental morbidity in the 35-44 age group in the Ural Industrial region. She examined 1,435 people who had lived in this region for at least 10 years or worked for at least 5 years in an industry with occupational hazards [Filimonova O. I., 2002].

One of the studies involving 289 people from 20 to 60 years old employed in the oil industry of the city of Nizhnevartovsk. The results show that the prevalence of caries among them is 99.0% [Pavlov I. B., 2004].

The study by I.M. Rabinovich showed that the spread of diseases of the SOPR in cotton factory workers is 59.13% in OG and 38.25% in KG [Rabinovich I. M., 1998].

Using the example of a fertilizer plant, a study was conducted on the condition of teeth among workers with different degrees of exposure to harmful industrial conditions. The researchers found that the risk of caries increases during the production of mineral fertilizers by 8.3% compared to normal working conditions, and this is influenced by a chemical factor. In addition, the number of teeth with a preserved healthy gingival margin is reduced by 36.6%, and teeth that become bleeding are reduced by 45.6% [Garus Ya. N., 2006].

Workers at petrochemical plants undergo dental examinations twice a year. Studies have shown that caries diseases account for about 18-23% of the total number of dental problems. This is due to the availability of quality criteria for the treatment of major dental problems in workers who are exposed to harmful effects in enterprises. These criteria help to identify and treat caries faster and more effectively [Yusupov Z.Ya., Daburov K.N., Irsaliev H.I., 2019].

Studies have also shown that the use of a therapeutic and prophylactic complex in chemical production workers for two years makes it possible to prevent and treat major dental problems, reducing the cost of treating caries and periodontitis. The application of the developed model of therapeutic and preventive care also prevents the exacerbation of dental problems and helps to prevent complications associated with caries and periodontitis. To improve the dental health of employees of chemical enterprises, many experts recommend including the position of a dental hygienist in the staff of the dental service of medical institutions of factories. This will improve the dental and oral care of employees and improve the quality of dental care [Yusupov Z.Ya., Daburov K.N., Irsaliev H.I., 2019].

Some scientific articles suggest that poor working conditions affect how often people get cancer in the mouth area. For example, people who have been working in chemical plants for more than 10 years are much more likely to develop precancerous oral diseases. The best way to prevent dental problems in the working population in industrial complexes is considered to be medical examination. It has been proven that due to this approach, the need for restoration work on teeth, as well as in the treatment of root canals, is reduced [Shulaev A.V., 2014].

Researchers are actively studying the impact of harmful factors on dental health. They believe that dust of solids, weather conditions, polluted air and chemicals undoubtedly lead to dental health problems. However, opinions on this issue differ at this stage [Abduazimov A.D. 1992].

As part of the national project, a dental study was conducted in the Nizhny Novgorod region, but there has been no information about the dental health of residents of Dzerzhinsk, a large industrial city with chemical production, over the past 10 years. There is also insufficient data on how age, gender and work experience in chemical enterprises affect the incidence of dental diseases in this city.

It is very important to study dental health problems in cities with poor ecology and in chemical enterprises. It is necessary to create a system that will help prevent dental health problems at these enterprises and organize a dental service. This will reduce the risk of dental disease in workers and residents of cities with poor environmental conditions [Leskov A.S., 2012].

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