THE ALGORITHM FOR ESTABLISHING A PREPATOLOGY GROUP OF PROFESSIONAL BURNOUT DEVELOPMENT (*Igor Zavgorodnii, Olga Lalymenko, Irina Perova, Valeriy Kapustnyk, Kseniia Zub, Irina Böckelmann*)

The professional activity of healthcare workers is associated with inevitable emotional overload, which is the source of occupational stress as well as the basis for the development of burnout. The establishment of the early symptoms of professional personal deformities are known to be a rather relevant problem within the scientific field of occupational medicine [1-3].

The aim of the study is to develop a methodological approach to the establishment of a prepathology group of the development of burnout. The study was carried out by means of a medical and psychological survey of 105 teachers in total. The Maslach Burnout Inventory (MBI-GS) questionnaire was used to determine the burnout severity [4]. Mathematical processing was performed using Principal Component Analysis [5].

The initial stage of the study included the survey of the teachers followed by the distribution of them into three groups, depending on the section of questions ("emotional exhaustion" - group A, "depersonalization" - group B, "reduction of personal achievements" - group C).

At the second stage, the values for each of the question sections were summed up and compared with the boundary ones (given for the interpretation of the respondents' answers); the initial level was assigned a value of - 0, the average -1, and the highest one - 2.

At the third stage, the group of prepathology of burnout development was determined. As a prepathology group we chose respondents who had the sum of points in all three sections of answers not exceeding "3" and at the same time the result on each of the three MBI-GS scales did not exceed 1 point.

Using on the Principal Component Analysis method, the features were ranked according to their degree of significance; the data was visualized, depending on their level of professional burnout. In order to achieve the latter, the "training" of the logistic regression model was conducted, the accuracy the "training" based on the results of cross-validation constituted to be 83±28% (p<0.05).

Thus, according to the MBI-GS questionnaire, all respondents were divided into 3 groups: without burnout (41 people); prepathology of burnout (29 people); significant signs of burnout (35 people).

Early detection of prepathological manifestations of burnout will allow an in-depth examination of workers and the implementation of preventive measures to maintain their performance as well as to reduce the expenditure on medical care and treatment of employees.

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