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TOPIC: OCCUPATIONAL STRESS AND IT'S RELATIONSHIP WITH EMPLOYEE PERFORMANCE : A COMPARATIVE STUDY ON GOVERNMENT AND PRIVATE MBBS DOCTORS.

Keywords: Doctors, Stress Identification, Hospitals, Artificial Intelligence, Statistical Analysis, Industry 4.0, Burnout

Findings

Initially, occupational stress developed among doctors is identified and validated through statistical techniques. The study is based on a group of doctors who were asked multiple questions regarding different prominent stress variables. In this study a hypothesis is postulated which is further validated with the aid of Statistical Package for the Social Sciences (SPSS) software in order to identify major stresses among doctors from various domains private and government. The reliability and validity of the instrument was determined with the help of factor analysis and computing Cronbach's alpha. The Cronbach's alpha of various items in each category of the research instrument was computed leading to data reduction where 80 statements were reduced to 42. Exploratory factor analysis (EFA) was conducted by using SPSS version 20.0. KMO AND Bartlett's test of Sphericity is selected from descriptives. The Cronbach's alpha coefficient for each dimension indicates good internal consistency of the items used to measure stress within each dimension, with values ranging from 0.765 to 0.896.

A KMO value of 0.781 suggests that the dataset has moderate to good sampling adequacy, indicating that the correlation structure among the variables is sufficiently strong to proceed with PCA. The findings suggest that addressing workplace stressors is important for enhancing the well-being of medical doctors and improving their job performance. From the T-test it is found out that there is a statistically significant difference between doctors from government and private hospitals in terms of environment stress, cultural stress, and physical stress. However, there are no statistically significant differences in social stress, emotional stress, and psychological stress. According to the findings, environmental stress has the most influence in private sector while physical stress is the dominant stress in government sector. It also concludes that the cultural stress is an insignificant indicator for both the domains of doctors.

After identification of numerous stresses through questionnaire, weights are assigned to common most stress factors by employing AHP method. Furthermore, comparative analysis and prioritization of stress factors is performed with the aid of TOPSIS. The current combined system is a quantitative analysis furnished to establish the feasibility of the methods in weighing and MCDM in stress assessment. Lack of balance among personal and

professional life is ranked as the most important problem for occupational stress factor globally in private domain doctors, while shortage of resources is seen as the most important in government doctors.

The outcomes such as accuracy, sensitivity and specificity aspects while employing Industry 4.0 technology were significant factors influencing the perceived various kinds of surgeries in different domains. Moreover, the results of the ANFIS modelling approach showed that with increase in percentage of industry 4.0 machines the operations sensitivity and accuracy increased, hence the most critical predictors. While specificity did not have any major impact on the surgeries. Henceforth, doctors can take preventive actions and simultaneously plan their work load with the aid of industry 4.0, providing better health benefits to patients making the healthcare industry much more efficient and stress-free.