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## Riga East Clinical University hospital Intensive Care unit personnel's twenty-four hour shifts and associated long-term effects

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Persistent stress can result in anxiety and depression episodes, in addition to physical health issues such as coronary heart disease. Workload and work-related stress are known to increase the incidence of substance addiction, social relationship difficulties, depression, and anxiety. Stress and a heavy workload can significantly impact work performance and increase the probability of occupational health hazards. The European Working Time Directive (EWTD), which applies to all professions in the European Union (EU), establishes the maximum workweek (48 hours) and vacation days. Since its implementation in 2009, the healthcare law has been linked to issues regarding the provision of healthcare. The substantial discrepancies in the working hours of doctors in various countries, as well as the mandatory control of working hours in multiple fields, raise additional problems about the selection and determination of these restrictions. In the past few years, the main hospitals in Latvia have evaluated the issue of staff scheduling in relation to patient safety and healthcare quality.

**Materials and methods** The study was planned as an analytical cross-sectional study. Employees of the Intensive Care Department of Riga Eastern Clinical University who met the inclusion criteria were surveyed. To meet the inclusion criteria, an employee must be a certified doctor, resident, or nurse who works 24-hour duty at least once a month. Statistical data processing was done with IBM SPSS v22. In addition to descriptive statistical methods, the following analytical statistical techniques were used: correlation analysis, Chi-square test, and binary logistic regression. Statistical significance was considered at  $p < 0.05$ .

**Results** The research collected data from 100 employees. 50 nurses, 28 certified physicians, and 22 residents took part in the study. 24-hour shifts were the most common (63%), followed by 8-hour shifts (24%), 16-hour shifts (12%), and 12-hour shifts (1%). Analysis of correlations revealed statistically significant links between the amount of hours worked and long-term health issues. Employees who frequently worked 8-hour shifts invested a great deal of time in their hobbies ( $p = 0.001$ ), rarely had a bad mood ( $p = 0.00$ ), made fewer errors at work ( $p = 0.001$ ), felt appreciated at

work ( $p = 0.006$ ), had good relationships with coworkers ( $p = 0.001$ ), and didn't experience excessive stress due to an increased workload ( $p = 0.001$ ). This group had less hazardous habits - they ate regular meals ( $p = 0.05$ ), consumed less alcohol ( $p = 0.001$ ), and smoked less ( $p = 0.028$ ). The 24-hour duty group spent less time on hobbies ( $p = 0.001$ ), had a more depressed mood ( $p = 0.002$ ), was unable to completely evaluate and care for the patient during the night ( $p = 0.047$ ), and made more errors at work ( $p = 0.001$ ). Similarly, 24-hour workers had unhealthy habits - they consumed more alcohol ( $p = 0.021$ ), smoked more ( $p = 0.02$ ), didn't consume regular meals ( $p = 0.001$ ), and frequently experienced excessive stress as a result of increased workload ( $p = 0.001$ ). Odds ratios for the presence of excessive stress under the impact of various risk variables were as follows: for multiple workplaces:  $OR = 6.42$  ( $SE = 0.63$ ,  $p = 0.008$ ); less likely to work 8 hours of work  $OR = 1.7$  ( $SE = 0.2$ ;  $p = 0.007$ ); and increased number of working hours per week  $OR = 1.05$  ( $SE = 0.04$ ;  $p = 0.014$ ).

**Conclusion** Long-term health issues for individuals increase in correlation with the number of hours they put in at work. Multiple workplaces displayed the highest odds ratio for excessive stress. These findings show that the study's examined patterns of work hours are significant long-term health risk factors.

### Biography

Evita Bine is affiliated to Riga Stradins university. Evita Bine is a recipient of many awards and grants for her valuable contributions and discoveries in major area of Intensive Care unit personnel's twenty-four hour shifts and associated long-term effects research. Evita Bine international experience includes various programs, contributions and participation in different countries for diverse fields of study. Evita Bine research interests reflect in Evita Bine wide range of publications in various national and international journals.

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