BURNOUT AND CARDIOVASCULAR RISK IN HEALTHCARE PROFESSIONALS DURING THE COVID-19 PANDEMIC

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Introduction

The COVID-19 pandemic presented unprecedented challenges for healthcare systems, including **limited expert staff availability** and the **risk of transmission** between patients and staff. The pandemic has resulted in **high rates** of mental health disorders among healthcare professionals, including **burnout**, which is already a significant issue in the industry. Long-term job stress can cause burnout and increase the **risk of cardiovascular disease.** Stress and unfavorable working conditions exacerbate cardiovascular disease in the physician occupational group. The goal of this project was to investigate the relationship between burnout and cardiovascular disease in healthcare professionals using *multivariable linear regression models.*

Image retrieved from https://www.cchealth.org/dmarvq/pharmacology/cov-covid.html#.xxpeo.html

Results

- **396 (73.7%)** completed sociodemographic characteristics, MBI subscale scores, and FBS
- Statistically significant differences in **sociodemographic information** observed between genders
  - Statistically significant differences in **FBS components** observed between genders
- Emotional exhaustion significantly **positively correlated** with **REM** and **light sleep average** *(p < 0.05)*

Correlation

Correlation analysis

- **High correlations** observed between MBI components, sociodemographic information, and FBS

Regression analysis

- **Negative association** between cardiovascular health and emotional exhaustion *(p < 0.05)*
- **Positive** association between **cardiovascular health and personal accomplishment** *(p < 0.05) (Model 4)*
- **Depersonalization** not included as a predictor in *Model 4*, although *Models 3 and 5* showed a **negative association** between cardiovascular health and depersonalization *(p < 0.01)*

Methods

- **Ethical approval** obtained from *Abu Dhabi COVID19 Research IRB Committee and Emirates IRB for COVID Research Committee*
- **Informed consent** obtained from participants
- Exploratory **observational cross-sectional study** conducted in Abu Dhabi hospitals and healthcare institutions from July to November 2020
- **STROBE – The EQUATOR Network** guidelines followed to design the protocol
- **Primary outcomes:** burnout through Maslach Burnout Inventory (MBI) emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) subscale scores; cardio-vascular risk through Fuster-BEWAT score (FBS); sleep quality through wearable monitoring technology (Polar Ignite)
- Data was collected from health care professionals through electronic surveys and its management included coding and matching participant information to random numbers
- **Descriptive statistics** and **Chi-square test** used for data analysis
- **Linear regression analysis** conducted to investigate association between outcome variable (FBS) and MBI scales adjusted with socio-demographic factors
- **Akaike information criterion (AIC)** used to select best fitting regression model
- Analyses performed with STATA 16.1

Conclusion

- The study provides evidence for the need for policymakers and organizations to **prioritize occupational health surveillance and workplace health promotion initiatives** to prevent and treat burnout and other mental health disorders in the workplace.
  - This is particularly important **during and after** the COVID-19 pandemic.

- The findings have important implications for improving the health and well-being of health care professionals and other workers experiencing burnout.

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