**"A COMPREHENSIVE STUDY BY USING DATA SCIENCE TO EVALUATE THE EFFECTIVENESS OF WORKPLACE MENTAL HEALTH PROGRAMS"**

**Introduction**

An individual's mental health is determined by their overall state of mind, there are times when work is difficult and it negatively impacts our mental well-being. Numerous studies have investigated the possible link between an individual's personality and their mental wellness within a work environment. The significance of mental health in the workplace has become more recognized in recent years. Workplace mental health program implementation has gained attention as organizations look to improve employee well-being and productivity. These programs include various activities to promote psychological well-being among staff members and address mental health issues in the workplace.

It is crucial to prioritize mental health within an organization, as highlighted by various studies. Goetzel et al. **[1]** illustrate that establishing and maintaining healthy workplace cultures can prevent tragedies from occurring and encourage those in distress to benefit from evidence-based interventions unencumbered by the stigma associated with care-seeking. Similarly, the research conducted by Rosoff and Smith **[2]** highlights the prevalence of stress-related disorders among workers, which requires a strategic and data-driven approach to mitigate these challenges.

Research on the integration of data science and workplace mental health programs is exciting because it builds on the developments in both domains. According to Szukits **[3]**, organizations should adopt data-driven evaluations instead of relying only on personal experience since the study highlights the need for thorough evaluation procedures and developments not only affect the tasks carried out by controllers and the methods used by them but also how they act in an organization and how they support management. This emphasizes how important data science may be in understanding the complexities of workplace mental health programs.

Recent developments in behavioural sciences and organizational psychology emphasize how important it is for businesses to support work cultures that put employee's mental health and well-being first. Accordingly, the research of Sypniewska et al. **[4]** emphasizes the connection between improved mental health and increased work satisfaction, staff retention, and the overall performance of the organization. Furnham and Eracleous **[5]** discovered a substantial correlation between diligence and three measures of work satisfaction (overall, intrinsic, and extrinsic). These results highlight how important it is to have reliable approaches, such as those provided by data science, in order to assess and improve the efficiency of mental health programs.

DATA DESCRIPTION: For our project, we have collected data from an online available dataset, This dataset is from a 2014 survey that measures attitudes towards mental health and frequency of mental health disorders in the tech workplace **[6]**. This research project uses data science techniques to conduct an extensive analysis.

Our study aims to fill in important gaps in knowledge about the effectiveness of workplace mental health programs by bridging theoretical understandings from a variety of research investigations. Our goal is to give organizations a road map for evidence-based decision-making by combining the knowledge extracted from various sources and highlighting the mutually beneficial link between employee well-being and organizational performance. We hope to use data science to spark an important shift in how workplace mental health is seen, assessed, and supported, creating work settings where staff members not only flourish but also make significant contributions to the overall goals of the company.

**References**

1. Goetzel RZ, Roemer EC, Holingue C, Fallin MD, McCleary K, Eaton W, Agnew J, Azocar F, Ballard D, Bartlett J, Braga M, Conway H, Crighton KA, Frank R, Jinnett K, Keller-Greene D, Rauch SM, Safeer R, Saporito D, Schill A, Shern D, Strecher V, Wald P, Wang P, Mattingly CR. Mental Health in the Workplace: A Call to Action Proceedings From the Mental Health in the Workplace-Public Health Summit. J Occup Environ Med. 2018.
2. Rosoff DB, Smith GD, Lohoff FW. Prescription Opioid Use and Risk for Major Depressive Disorder and Anxiety and Stress-Related Disorders: A Multivariable Mendelian Randomization Analysis. JAMA Psychiatry. 2021.
3. Szukits, Á. The illusion of data-driven decision making – The mediating effect of digital orientation and controllers’ added value in explaining organizational implications of advanced analytics. *J Manag Control* **33**, 403–446 (2022). <https://doi.org/10.1007/s00187-022-00343-w>
4. Sypniewska, Barbara A. & Baran, Małgorzata & Kłos, Monika. (2023). Work engagement and employee satisfaction in the practice of sustainable human resource management – based on the study of Polish employees. International Entrepreneurship and Management Journal. 19. 1-32. 10.1007/s11365-023-00834-9.
5. A. Furnham, A. Eracleous, and T. Chamorro-Premuzic, “Personality, motivation and job satisfaction: Hertzberg meets the big five,” J. Managerial Psychology, vol. 24, no. 7-8, pp. 765-779, 2009.
6. Dataset: https://www.kaggle.com/code/aditimulye/mental-health-at-workplace/input