

Stress Management for Health and Safety

Oscar Rodriguez-Franco PhD, MPH, MBA, CIH

April 2025

THE PROBLEM

- In 2024, the nation's future was the leading source of stress for adults in the United States, with 77% identifying it as a major concern. The economy followed closely, affecting 73% of respondents, while the 2024 U.S. presidential election was a significant stressor for 69% (APA, 2024).
- Around two in five workers (43%) typically feel tense or stressed during their workday, a number that rises to over three in five (61%) among those with lower psychological safety at work. Additionally, 15% of workers characterize their workplace as somewhat or very toxic, with those experiencing higher psychological safety being 10 times less likely to describe their workplace as toxic (3% vs. 30%) compared to those with lower psychological safety (APA, 2024a).
- Stress affects both individuals and the organizations (Michie, 2002):
 - Individuals suffer threats to:
 - Health.
 - Wellbeing / quality of life.
 - Functioning / goal achievement.
 - Self-esteem /confidence.
 - Personal development.
 - Organizations are affected by:
 - Increased absenteeism and turnover.
 - Reduced quantity and quality of work.
 - Reduced job satisfaction and morale.
 - Problems of recruitment.
 - Poor communication and increase conflict.
- Three useful models of stress are (Romas and Sharma, 2017):
 - Response-based model (Selye's *General Adaptation Syndrome*: Alarm, resistance, exhaustion).
 - Event-based model (Holmes And Rahe's *Social Readjustment Rating Scale*: estimated amount of change or readjustment need per event).
 - Interactional model of stress (Lazarus and Folkman's *Stress Appraisal and Coping Model*: stressor > primary appraisal > secondary appraisal > coping).

Stress Management for Health and Safety

Oscar Rodriguez-Franco PhD, MPH, MBA, CIH

- Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker (NIOSH, 1999).
- The NIOSH model of job stress includes:
 - Stressful job conditions:
 - Nature of work.
 - Management style.
 - Work roles.
 - Interpersonal relationships.
 - Career concerns.
 - Environmental conditions.
 - Individual and situational factors:
 - Balance between work and life or personal life.
 - A support network of friends and coworkers.
 - A relaxed and positive outlook of life.
 - Risk of injury and illness:
 - Short-lived or infrequent episodes of stress pose little risk. But when stressful situations go unresolved, the body is kept in a constant state of activation, which increases the rate of wear and tear to biological systems. Ultimately, fatigue or damage results, and the ability of the body to repair and defend itself can become seriously compromised. As a result, the risk of injury or disease escalates (NIOSH, 1999).
- Stress, worry, and impulsivity are related. A study involving military recruits confirmed that worry is related to impulsivity and supported the notion that lacking mindfulness and self-compassion in excessive worriers, may lead to impulsivity (Mantzios, 2014).
- Individuals who scored high in motor and cognitive impulsivity and non-planning, as well as scoring low in future orientation, were found to engage in counterproductive work behaviors related to near misses and accidents such as (Bowman-Upton, 1992):
 - Violating safety rules and procedures.
 - Ignoring safety warnings.
 - Operating machine carelessly.
 - Rendering safety devices inoperative.
 - Working under the influence of drugs/alcohol.

Stress Management for Health and Safety

Oscar Rodriguez-Franco PhD, MPH, MBA, CIH

- Exposure to workplace aggression, due to impulsivity and other factors, was associated with a host of negative psychological, emotional, and physiological outcomes, which also predicted employee underreporting of accidents and near misses (Jiang et al., 2018).
- Workplace aggression was a stressor found to be positively related with negative safety outcomes such as accidents, near misses, as well as low participation and compliance with safety expectations. This relationship was mediated by resource depletion in the form of cognitive failure and rumination, and moderated by mindfulness and a positive safety climate (Demsky, 2015).

STRESS MANAGEMENT FOR HEALTH AND SAFETY

- Job stress factors are considered occupational hazards such as other ergonomic, physical, chemical, and biological hazards, and can be addressed using a safety and health management system.
- OSHA's Recommended Practices for Safety and Health Programs is an applicable model for the organizational management of work-related stress (OSHA, 2016).
- An example of organizational and worker focused interventions for stress management are (NIOSH, 2008):
 - Organizational:
 - Workload should be in line with workers' capabilities and resources.
 - Workers' roles and responsibilities should be clearly defined.
 - Employees should enjoy opportunities to participate in decisions and actions affecting their jobs.
 - Uncertainty about career development and future employment prospects should be addressed by the employer.
 - Opportunities for social interaction among workers should be provided.
 - Worker-focused interventions:
 - Training in coping strategies.
 - Progressive relaxation.
 - Biofeedback.
 - Cognitive-behavioral techniques.
 - Time management.
 - Interpersonal skills.
- Stress Management Principles (Romas and Sharma, 2017):
 - It is not the stressor but our perception of the stress that is important.

Stress Management for Health and Safety

Oscar Rodriguez-Franco PhD, MPH, MBA, CIH

- We need to become aware before considering change.
- We must make relaxation a part of our lives.
- We must think first before passing judgment.
- Balancing our anger balances our lives.
- It is advised to enjoy balanced meals at regular times, and cherish the gift.
- It is advised to start a physical activity program, and keep exercising consistently.
- The Big Four of mental toughness include (Divine, 2015; Jensen et al., 2020):
 - Arousal control using proper breathing techniques.
 - Positive internal dialogue.
 - Mental rehearsal.
 - Micro planning (goal setting).

RECOMMENDATIONS (NSC, 2016):

- Eat a balanced and nutritious diet starting with breakfast, and get a good night's sleep.
- Volunteer time and services; doing something for others can help a person forget their own problems and increase self-esteem.
- Seek professional help; use employee assistance programs or participate in special therapy that can teach ways to better manage the problems that are causing stress.
- Keep moving – studies show that exercising for 30 minutes a day reduces stress.
- Learn to express your feelings – you don't have to face problems alone.
- Determine the source of the stress; if it can't be removed from your life, learn to cope by developing a systematic and rational way of thinking through the situation.

References

- APA (2024). *Stress in America. A nation in Political Turmoil*. American Psychological Association.
Retrieved from: <https://www.apa.org/pubs/reports/stress-in-america/2024/2024-stress-in-america-full-report.pdf>
- APA (2024a). *Work in America Survey. U.S. workers adjust to the changing nature of employment*. American Psychological Association. Retrieved from: <https://www.apa.org/pubs/reports/work-in-america/2024>
- Balban et al. (2023). Brief structured respiration practices enhance mood and reduce physiological arousal. *Cell Reports Medicine* 4, 100895. <https://doi.org/10.1016/j.xcrm.2022.100895>
- Bowman-Upton, N. (1992). *Impulsivity and work-related accidents* (Publication No 9307299) [Doctoral dissertation, Baylor University]. ProQuest Dissertations and Theses Global.

Stress Management for Health and Safety

Oscar Rodriguez-Franco PhD, MPH, MBA, CIH

- Demsky, C. A. (2015). *Workplace Aggression: A Multi-Study Examination of Work and Non-work Consequences* (Publication No 3712249) [Doctoral dissertation, Portland State University]. ProQuest Dissertations and Theses Global.
- Divine, M. (2015). *Unbeatable Mind: Forge Resiliency and Mental Toughness to Succeed at an Elite Level*. 3rd Edition. CreateSpace Independent Publishing Platform. p 252.
- Jiang, L. et al. (2018). Voices carry: Effects of verbal and physical aggression on injuries and accident reporting. *Accident Analysis and Prevention*, 118, 190-199.
- Mantzios, M. (2014). Exploring the Relationship between Worry and Impulsivity in Military Recruits: The Role of Mindfulness and Self-compassion as Potential Mediators. *Stress and Health*, 30, 397–404.
- Michie, S. (2002). Causes and Management of Stress at Work. *Occup Environ Med*, 59, 67–72.
- NIOSH (1999). *Stress at Work*. NIOSH 99-101. Retrieved from: <https://www.cdc.gov/niosh/docs/99-101/default.html>
- NIOSH (2008). *Exposure to Stress. Occupational Hazards in Hospitals*. NIOSH 2008-136. Retrieved from: <https://www.cdc.gov/niosh/docs/2008-136/pdfs/2008-136.pdf>
- NSC (2016). *Manage Stress At Work*. National Safety Council. Retrieved from: https://www.nsc.org/getmedia/bfb3327b-466d-42b5-be90-567eace9db43/stress-english.pdf.aspx?srsId=AfmBOor_NDRZyS6uPaPrg8jr6mbpJVZUtDgnBMb5EG1Eo3q6feZsFb8t
- OSHA (2016). *Recommended Practices for Safety and Health Programs*. OSHA 3885. Retrieved from: https://www.osha.gov/shpguidelines/docs/OSHA_SHP_Recommended_Practices.pdf
- Jensen et al. (2020). The Benefit of Mental Skills Training on Performance and Stress Response in Military Personnel. *Frontiers in Psychology*, 10, 2964. <https://doi.org/10.3389/fpsyg.2019.02964>.
- Romas, J. A., Sharma, M. (2017). *Practical Stress Management. A Comprehensive Workbook*. Elsevier. 226 p.

Bibliography

1. Seaward, B.L. (2021). *Essentials of Managing Stress*. 5th Edition. Jones & Bartlett Learning. ISBN 9781284180725
2. Greenberg, M. (2016). *The Stress Proof Brain. Master Your Emotional Response to Stress Using Mindfulness & Neuroplasticity*. New Harbinger Publications, Inc. 242 p. ISBN 9781626252660
3. Divine, M. (2015). *Unbeatable Mind: Forge Resiliency and Mental Toughness to Succeed at an Elite Level*. 3rd Edition. CreateSpace Independent Publishing Platform. ISBN 9781508730514
4. Mental Health America (2023). *Where to Start: A Survival Guide to Anxiety, Depression, and Other Mental Health Challenges*. Rocky Pond Books. 208 p. ISBN 9780593531402.