



FOUNDATIONS OF WELL-BEING

WELL-BEING SELF ASSESSMENT

- Scan the QR code to take a well-being assessment, based on the Flourishing Scale developed by Diener et al.¹



COMMON STRESSORS IN BIOMEDICAL RESEARCH

- **Long hours:** Extended research hours causing fatigue
 - May be helpful to promote a shift from work-life balance to work-life integration
 - Refer to the **TERRA module on Time Management** for additional insights
- **High expectations:** Pressure to excel can be overwhelming
 - **The impostor phenomenon:** Pressure and feelings of inadequacy
 - Refer to the **TERRA module on Normalizing Failure** for additional insights
- **Funding uncertainty:** Insecure funding and continuous grant writing create career uncertainty
- **Competition:** Intense peer competition adds pressure
 - The "publish or perish" culture pressures researchers to consistently produce work
- **Lack of mentorship:** Leaves many without essential guidance for career growth
 - Refer to the **TERRA modules on Mentoring and Supporting Trainees' Mental Health and Sponsorship** for additional insights
- **Interpersonal conflicts (e.g., bullying and harassment):** Can harm mental health and productivity

WHAT MAKES A POSITIVE RESEARCH CULTURE

- A thriving research culture should be inclusive, transparent, rigorous, and objective.²
- **Concrete strategies** to build a positive research culture:
 - **Inclusive**
 - Diverse research teams that represent the diverse populations they study
 - Reward generous leadership that nurtures early career researchers and mentoring roles
 - **Transparent**
 - Pre-specification and registration of research plans in publicly available protocols
 - Reward good data management and open science endeavors
 - Invest in open science infrastructure
 - Adhere to research reporting guidelines
 - **Rigorous**
 - Mandatory research integrity education at all career stages
 - Appropriate involvement of experts (clinical, topic, methodological, statistical)
 - Ethics committee assessment and compliance with local regulations



TRAINING TO ENHANCE RESEARCHER RESILIENCE AND ADAPTABILITY

- **Objective**
 - Revise researcher assessment away from individualist metrics
 - Recognize diverse career pathways across the research spectrum
 - Training for effective leaders: Management of people and research grants

TERMS AND DEFINITIONS

- **Burnout:** Syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed³
 - **Characterized by three dimensions:** (1) feelings of energy depletion or exhaustion; (2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and (3) reduced professional efficacy
 - Classified by the World Health Organization as an **occupational phenomenon**, not as a medical condition
- **Professional well-being** is a function of:
 - Being satisfied with one's job
 - Finding meaning in work
 - Feeling engaged at work
 - Having a high-quality working life
 - Finding professional fulfillment in work
- **Resilience:** The ability of an individual, organization, community, or system to withstand, adapt, recover, rebound, or grow from adversity, stress, or trauma⁴
- **Adaptability:** The ability to adjust behavior in changing or uncertain situations⁵
 - A skill for maintaining essential processes while adjusting to new conditions for continuous development

INDIVIDUAL INTERVENTIONS

- A **cohesive approach** to biomedical researcher well-being requires integrating individual-level well-being initiatives with organizational system changes
- Concrete strategies for **individual well-being**⁶
 - Learn to recognize signs of distress: Identify mental health challenges in yourself and others; ask, "How are you doing, really?"
 - Stay connected and reach out for help: Engage with a support network of 2-3 trusted friends or family during tough times
 - Prioritize moments of joy and connection: Make time for activities that bring happiness, such as hobbies and time with loved ones
 - Get back to basics with good health habits: Focus on nutrition, sleep, exercise, and reducing alcohol/substance use; even a 10-minute outdoor walk can help
 - Use your voice to advocate for positive change: Promote positive changes in your workplace or community



SYSTEMS INTERVENTIONS

- **The Well-Being Influencers Survey for Healthcare (WISH)⁷:** A systems-level well-being framework that includes specific metrics to direct efforts in fostering more supportive and equitable work environments
 - Refer to the **TERRA module on Assessment and Implementation Tools for Well-Being** for additional insights
 - Includes **eight influencers**
 - **Psychological safety:** A workplace attribute where individuals feel safe to share ideas, ask questions, and admit mistakes without fear, fostered by leadership, teamwork, and mutual respect
 - **Perceived social support:** Emotional and practical support from coworkers, proven to enhance job satisfaction and protect against burnout
 - **Leadership support:** Support from leaders who prioritize employee growth, ethical decision-making, and transparency, shown to directly improve well-being and engagement
 - **Work meaning:** Purpose and fulfillment supported by autonomy, skill growth, contributions to the greater good, and recognition, essential for engagement and professional satisfaction
 - **Inclusion and belonging:** Being valued as an individual while contributing meaningfully to the team, linked to creativity, commitment, and overall workplace well-being
 - **Justice:** Occupational fairness where transparent policies, clear decision-making, and responsive leadership create trust and promote well-being
 - **Work-life integration:** “Balance” enabled from such aspects as flexible scheduling and predictable workloads that reduce work-life conflict, foster loyalty, reduce absenteeism, and mitigate burnout
 - **Work conditions:** The environment and resources that support healthcare professionals in doing their jobs effectively, critical for job satisfaction and reducing burnout risk
- **Organizational psychology:** The study of human behavior, cognition, emotion, and social interactions in the workplace; applies psychological principles to improve employee well-being, motivation, job satisfaction, and overall organizational performance
 - **The Job Demands-Resources (JD-R) Model⁸**
 - **Job Demands:** Can lead to burnout and negative outcomes
 - **Job Resources:** Enhance work engagement and positive outcomes

JOB RESOURCES TO SUPPORT BIOMEDICAL RESEARCHER WELL-BEING

- **Psychological safety:** The shared belief among team members that the environment is safe for interpersonal risk-taking⁹
 - How to cultivate psychological safety¹⁰
 - **Form a team**
 - Choose initial team members carefully
 - Socialize new team members into group culture and identity
 - **Cultivate supportive group norms**



TRAINING TO ENHANCE RESEARCHER RESILIENCE AND ADAPTABILITY

- Craft list of agreed-upon social norms when team is formed
- Model group norms
- Keep a physical reminder of group norms (poster, sticky notes, share norms slide at beginning of meeting)
- **Make it safe(r) to take risks**
 - Encourage activities where many ideas are put forth
 - Separate process of brainstorming ideas from process of prioritizing ideas
 - Praise dissent against majority opinion and create regular opportunities for it
- **Ask for help easily**
 - Explicitly invite input early and often
 - Frame help-seeking as part of dependability and mutual respect
- **Value and use unique skills**
 - Introduce and use a "strengths in difference" framing
 - Map individual skills and expertise onto project goals and activities
 - Spend time team building and help members get to know one another
- **Bring up problems and manage mistakes**
 - Reframe mistakes as learning opportunities
 - Create processes for raising issues anonymously
 - Establish agreements around likely collaboration problems (e.g., authorship)
 - Consider implementation of actual consequences or repercussions
 - Let mistakes go after addressed by team
- **Manage social rejection and undermining**
 - Call attention to hostile behavior and remind group of shared commitments
 - Seek explicit repair through acknowledgement and apology
 - If tensions are high, reconvene after people have had time to process
- **Organizational justice:** Employee perceptions of fairness in the workplace¹¹
 - **Three types:** Distributive, procedural, interactional
 - **Distributive justice:** Fairness associated with decision outcomes
 - Equity vs. equality vs. need
 - **Procedural justice:** Fairness of processes
 - Elements: Consistency, lack of bias, representation
 - **Interactional justice**
 - **Interpersonal:** Perceptions of respect



TRAINING TO ENHANCE RESEARCHER RESILIENCE AND ADAPTABILITY

- **Informational:** Adequacy of explanations (timeliness, truthfulness)
 - Maintaining procedural and interactional justice can preserve a sense of fairness when distributive justice is at risk
- **Social support:** The provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors¹¹
 - **Four types:** Emotional, appraisal, instrumental, informational
 - **Emotional Support:** Involves care, empathy, and attentive listening, fostering a nurturing environment
 - **Appraisal Support:** Focuses on affirmation and self-assessment to boost confidence
 - **Instrumental Support:** Offers tangible assistance for overcoming challenges
 - **Informational Support:** Provides advice and information for decision-making



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