



Healthy Generations

Maternal & Child Health Program
School of Public Health

Job Stress

UNIVERSITY OF MINNESOTA

Volume 6: Issue 2
February 2006

Job Stress: Desk Rage on the Road to Burnout

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The word *stress* is derived from the Latin word, *stingere*, meaning to draw tight.

Job stress is excessive and harmful emotional and physical responses that occur when job demands do not match the capabilities, resources, or needs of the employee.¹ This kind of stress is not the same as feeling challenged. Challenge is motivating and energizing and, when a challenge is successfully met, an employee feels satisfied and relaxed. A productive and meaningful work life includes challenge. Job stress should not be normal and can lead to serious mental and physical health consequences. Job stress may be a particular concern of public health employees because their job demands often exceed budgetary and structural resources.

What causes job stress?

Job stress occurs in response to both workplace and employee factors, but the characteristics of the workplace likely play the primary role. A recent report by the National Institute for Occupational Safety and Health identified the following job conditions that are related to stress:²

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Many public health workers are committed to improving the health of women, children, and their families, but do not always take care of themselves. It is difficult to balance the responsibilities of a demanding professional life with commitments to family, friends, and one's self. Because concerns about balance and burnout have permeated discussions about the public health workforce, this *Healthy Generations* is unlike any other we have produced. While we have focused on MCH indicator problems in the past, this volume is unique in that we consider the professional stress of those who guard the public's health. These are hard times for public health workers. These professionals tend to be resilient and focused, but their resolve can be chipped away by budget cuts, bureaucracies that produce inefficiencies rather than services, and political agendas that stray from a public health perspective. Some public health workers have the same problems as the people they serve. They may struggle to engage in healthy behaviors. They may care for children with developmental problems or chronic diseases or they may care for their aging parents. They may neglect preventive care or experience an unintended pregnancy. We may know health educators who are expert at designing school curricula but who don't always have time to talk to the children in their lives. We may work with managers who can compassionately supervise dozens of employees but who cannot find time to stay in touch with friends. Many public health workers suffer from the very diseases and conditions they work to prevent: diabetes, hypertension, depression, heart conditions, alcoholism, obesity, domestic abuse, and cancer. Of specific concern is that many public health professionals suffer job-related strain that in turn, could further affect physical health.

This slim volume of *Healthy Generations* can only cover a limited amount of information about job strain and burnout, but it acknowledges the stress that people who do profoundly important work experience and it reflects our hope that some job stress can be alleviated. We present this volume with gratitude to the public health workers who have committed their talents to promoting our health and well-being.

Wendy L. Hellerstedt, MPH, PhD

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- **The design of the tasks.** A heavy workload, infrequent breaks, long work hours, and hectic and routine tasks that have little meaning and do not use the employee's skills or provide the employee with a sense of control.
- **Management style.** Lack of communication between employees and management, lack of employee input in the agency/organization, and lack of family-friendly policies.
- **Interpersonal relationships.** Poor social environment or lack of social support from colleagues and supervisors.
- **Work roles.** Conflicting or uncertain professional expectations, too much responsibility or not enough responsibility to energize or challenge the employee.
- **Career concerns.** Job insecurity, lack of professional growth/promotion, or rapid changes for which the employees are not prepared.
- **Environmental conditions.** Unpleasant or dangerous physical surroundings, including crowding and ergonomic problems.

Workplace bullying can also occur and cause stress. Rayner and Hoel³ described five categories of bullying that are related to depression, low self-esteem, and health complaints:

- **Threat to professional status,** such as belittling opinions and public professional humiliation.
- **Threat to personal standing,** such as teasing and insults.
- **Isolation,** such as preventing access to opportunities (e.g., training) or withholding information.
- **Overwork,** including unnecessary interruptions and impossible deadlines.
- **Destabilization,** including failure to give credit when due, meaningless tasks, removal of responsibility and shifting professional goals.

Burnout: a special kind of job strain. Burnout is a combination of physical fatigue, emotional exhaustion (e.g., disinterest, impatience, anxiety), and cognitive weariness (e.g., decreased mental alertness, decreased efficiency in problem solving).⁴ The stages of burnout may include:^{4,5}

- **Trigger.** Employees have psychological "contracts" with employers, or expectations about how a job will be performed. A triggering event is when there is a major disruption in this "contract": for example, the employee cannot maintain the balance of work demands and renewal through rest, learning, and social support.
- **Mid-level.** There is loss of physical stamina, emotional strength, and/or cognitive ability, which results in persistent anxiety or worry in the face of job stress. This stage includes an escalating experience of such losses.
- **Advanced/serious level.** Symptoms of depression may become a predominant emotion. Psychological withdrawal may occur (e.g., the employee may become cynical about work or become distant from colleagues). The employee experiences reduced efficiency, which may escalate to a severe lack of productivity or even incompetence.

Who is affected by job stress?

Surveys tell us that the majority of employees may be affected by job strain. A Northwestern National Life survey indicated that one-fourth of employees view their jobs as the number one stressor in their lives.⁶ Another insurance survey reported that problems at work are associated with more health complaints than any other stressor, including family and financial problems.⁷ A Princeton survey found that three-quarters of employees believe that they have more on-the-job stress than employees a generation ago.⁸

While job stress in the public health workforce has not been specifically studied, it is clear that this is an important issue for the approximately 500,000 salaried public health employees in the U.S. (approximately 50,000 are nurses and 200,000 are local or state government agency employees).⁹ The advanced age of these employees may introduce a unique strain. It is estimated that perhaps 50% of federal and 30% of state public health employees will retire by the end of the decade.^{10,11} Given the budget deficits of the federal and many state governments, and the potential of an employee shortage, it is possible that some retiring employees will not be replaced. In fact, a recent study of the public health workforce showed that the single greatest barrier to current adequate staffing is budget constraints.¹² There may also be a concern, given the salaries of public employees, that the most talented young employees will opt for private industry.

What are the health consequences of job strain?

The stress response occurs automatically when someone feels threatened. The pituitary gland responds by releasing adrenocorticotrophic hormone (ACTH). ACTH acts like an alarm signal in the brain: it tells the adrenal glands to release a flood of stress hormones into the blood. These hormones speed reaction time, sharpen the senses, quicken the pulse, deepen respiration, increase speed and agility, and tense the muscles. This response (e.g., "fight-or-flight") is biologically normal. Short-term or infrequent episodes of stress pose little health risk because the body returns to a normal state. However, unresolved or long-term stressful situations keep the body in a constant state of arousal, which ultimately fatigues or damages the body.²

The early signs of stress are familiar: stomach upsets, diarrhea, headaches, sleep disturbances, and mood changes. Less obvious than the physical symptoms of stress are the feelings of frustration, anger, or hopelessness that stressed-out employees can bring to the workplace. In the last several decades research suggests that job-specific stress could be related to long-term health conditions, such as:¹³

- **Cardiovascular disease,** including behaviors and conditions that are precursors to cardiovascular disease (e.g., smoking, overweight, diabetes, hypertension, high-fat intake).¹³⁻¹⁵ For example, cortisol (a stress hormone) is known to be associated with hypertension and high lipids, both risk factors for heart disease and stroke. Cortisol may also play a role in the accumulation of abdominal body fat.
- **Musculoskeletal disorders,** especially those of the back and upper extremity.²

- **Psychological disorders.** If the fight-or-flight response never turns off, then stress hormones can create persistent feelings of anxiety or helplessness. Burnout and depression vary by occupation; some of this variation could be explained by job stress, but financial and status variations could also be explanatory.^{16,17} Data are not clear about the association of job stress to substance abuse.^{18,19}

- **Immune and other system disorders.** The data are not clear about job-related stress and immune disorders, but prolonged stress can keep cortisol levels elevated, thus suppressing the immune system. Conversely, it is known that stress exacerbates the symptoms of autoimmune diseases, in which the immune system attacks the body's own cells. Skin conditions (e.g., psoriasis, eczema, hives) and asthma may also be triggered by stress.

Responses to stress

Stress involves both perception and response. Effective responses range from changing the workplace stressor to changing the employee's reaction to the stressor. Every workplace is different, as is every employee: some stresses

are time-limited, some are chronic; some stressors are major, some are an accumulation of minor events; some employees accurately perceive stress and some do not; and personality traits, as well as non-work life events, can influence the role job stress plays in an employee's life. Irrespective of such variation, the emotional and psychological health of employees should be protected. The following factors, at the very least, are known to threaten the health of employees and should be eradicated from the workplace: excessive demands, refusal to allow employee discretion regarding the pace and process of work, deliberate withholding of materially important information, and chronic failure to acknowledge or credit the achievements of employees.²⁰ It is important that public health professionals implement "best human resources practices" into the worksite to avoid the harmful consequences of job stress. It is also important that public health researchers continue to ask important questions about job stress, including how social support may buffer the effect of a toxic workplace, whether interventions that improve personal coping mechanisms (e.g., diet, exercise, meditation) can alter stress reactions, and how class and sex may differentially interact with the work environment to produce stress.

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Gillian Lawrence

The American workplace is changing rapidly and so is the work environment for public health professionals. Unfunded mandates, precarious financial support, and emerging health threats have created a unique set of challenges for public health workers.

Robert Veninga, Ph.D., Professor in the School of Public Health at the University of Minnesota, is an expert in occupational stress. Recently he wrote an article about the 10 strategies that leaders can use to build high-performance organizations.¹ Dr. Veninga shared these strategies, and additional comments, with *Healthy Generations*:



Richard Anderson

1. Create an ethical work environment. The starting point to build truly excellent organizations is to create an impeccably honest organization. Many workers question the integrity of their superiors; when this happens, employees are more likely to leave their jobs. Outstanding organizations foster communication where colleagues can be honest about both the positive aspects of their work-lives as well as the challenges. When mistakes happen, ethical organizations don't unfairly blame others. Rather they acknowledge them, learn from them, resolve the issues and move on.

2. Institute a mentoring program. Mentoring relationships are mutually beneficial. The mentor has the opportunity to cultivate the next generation of leaders and leave a legacy to the workplace. The mentored employee gains insight about the mission, values, challenges, strengths, and culture of the organization. Through the mentoring relationship, employees can gain confidence in their potential to make meaningful professional contributions.

3. Be passionate. It is important for organizational leaders to be passionate about their organization's priorities, even when times are difficult. "When leaders are passionate about their jobs, respect is generated and energy begins to flow through the organization."¹ One of the qualities of a "truly great" hospital or public health agency is passionate leadership.

4. Give employees a break. Most employees are overwhelmed by how much they are asked to do and feel stretched between work and home commitments. Organizations lose productivity if workers are too strained. Employees should be encouraged to take all their vacation time and abstain from work during vacations. Flexible work schedules can help in reducing work-family conflicts. Other strategies to refresh

overworked employees, maintain efficiency and decrease turnover include sabbaticals and opportunities to attend professional conferences.

5. Encourage creativity. Employees also benefit from the "freedom to accomplish their goals in the context of the organization's priorities."¹ Everyone has creative potential, and everyone has a method through which they achieve peak performance. Organizations should be flexible and allow employees time to think and work creatively on projects they are passionate about.

6. Share the credit. Effective leaders know that no single person is responsible for an organization's success, and when the contributions of all employees are recognized, a deep sense of pride emerges throughout the organization. "Health care leaders who want to create great work environments know they can't do it alone. When performance slides, they shoulder responsibility themselves; when success is achieved, they make sure that the credit goes to others."¹

7. Build a community. Employees who feel connected to and respected by others are more likely to stay with an organization. Showing kindness, expressing appreciation, and celebrating meaningful events help build community. When these actions are incorporated into an organization's climate, "a sense of pride bubbles forth throughout the workforce."¹

8. Develop a sanctuary. The business of everyday life often makes it difficult to find the time or place for reflection, and sanctuaries can provide this needed space. Dr. Veninga explains that there are two types of sanctuaries, *public* and *private*. A public sanctuary can be a room set aside for prayer or meditation, as a place of quiet and renewal. Private sanctuaries can be as simple as "a sustaining e-mail message from a friend, an inspiring prayer, [or] an encouraging note from a colleague."¹ Both types of sanctuaries can help workers refresh their souls and redefine their priorities.

9. Create a cause, not a business. Too often the business end of health care overshadows the more important mission of healing the sick and caring for the less fortunate. Health care leaders must help keep this mission alive by spending time with employees, giving them encouragement, reminding them of the importance of their work, and "rewarding those who quietly and without fanfare are keeping the vision alive."¹

10. Spirituality in the workplace matters. Employees want their values and religious traditions respected. They need sanctuaries where their spirits can be healed and they want destructive workplace conflicts resolved. As noted earlier, unmediated conflicts at work reduce productivity and morale. Equally important, they leave "a trail of hurt and spiritual discomfort."¹ To diminish such conflicts, individual differences need to be respected and strategies must be put into place to diminish tension.

What is the most important strategy in creating outstanding work environments? Dr. Veninga said it is keeping the focus on one's calling, which is healing and providing hope for those we serve.

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Robert Veninga, Ph.D. is a Professor in the Division of Health Services Research, Policy and Administration at the University of Minnesota's School of Public Health. He is an award-winning author, having published four books and 85 articles focusing on occupational stress, organizational change, and career renewal. He was the first recipient of the Leonard Schuman Excellence in Teaching Award presented by the School of Public Health.

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In Japan, work stress has been recognized as a cause of death for more than two decades. *Karoshi* is the Japanese word that means "death from overwork."

Data Moment

Temporality in Exposure - Health Outcome Studies

Data about current exposures may not be a good reflection of past exposures or of cumulative exposures. In job strain research, it is common (but not optimal) to collect data about the current work environment in order to conduct analyses about outcomes (e.g., obesity, hypertension, substance use) that may have had their onset decades previously. One measure of the quality of analysis is the degree of certainty that the exposure (e.g., job strain) preceded the onset of the disease or health behavior. Despite the fact that job strain may change over time (and thus one cannot be 100% certain it came before the outcome), there is substantial research evidence that job strain is associated with cardiovascular risk factors. However, the most compelling studies of these associations are rare. Such studies would completely assess work history in order to: (1) examine past job strain that clearly occurred before the health behavior or disease onset; (2) evaluate the association of cumulative job strain to health; and (3) determine if changes in job strain (e.g., shifting from high strain to low strain positions) are related to health outcomes.

New Director of MCH Outreach

Please welcome Diane Benjamin, MPH, as the new Director of Outreach for the Maternal and Child Health Training Program. She will be responsible for continuing education and outreach, including the Healthy Generations newsletter, the program website, conferences and institutes, technical assistance to MCH professionals in the community, and identifying and coordinating community field experiences for MCH graduate students. Diane's special areas of expertise are working with administrative data sets, including census data; GIS mapping; message framing; and many child and family public policy topics, especially those affecting low-income families. Diane is available for consultation and technical assistance on these and other topics.



Diane spent the previous 11 years as Director of the KIDS COUNT Program at Children's Defense Fund Minnesota, monitoring and reporting on the well-being of Minnesota children. Prior to that, she worked with the ASSIST tobacco-control project at the Minnesota Department of Health. She is a 1992 graduate of the Community Health Education program at the University of Minnesota.

Diane can be reached at benjamin@epi.umn.edu or (612) 625-4891.





Reducing Workplace Stress: Structure, Benefits, and People

Heidi Culbert

When we think about the effects of the workplace on health, we usually think about accidents, injuries, poisonings, and sometimes cancer.¹ However, the workplace can also cause health problems by contributing to prolonged stress among workers.²⁻⁴ While a certain amount of stress is an intrinsic part of work and is beneficial to achievement, too much stress for too long can lead to cardiovascular problems, anxiety and depression, and other conditions.⁵ For example, a study of over 21,000 nurses found that job demands affected physical functioning, vitality, and mental health.⁶ For these nurses, the declines in health functioning associated with job strain were as large as those associated with smoking and sedentary lifestyles. Fortunately, just like workplace interventions to reduce injury and accident risk, we now recognize the importance of specific environmental interventions to reduce or prevent job stress.

The Unique Challenges of Public Health Work

The nature of public health work, as well as the kind of people who choose to work in public health, may be related to internal and external stressors. Stephan Birkland, at the Minnesota State Employee Assistance Program, recognizes the specific stresses of public health workers when he recounts the frustration one employee expressed to him: “We’re not making widgets, we’re changing lives and affecting a future generation. We are susceptible when resources are taken away, when we lose support, when the political atmosphere changes, and there is less money.” Birkland said that when resources are diminished, the public health professional cannot say, ‘I’ll slow down, I’ll do less’. “Many are too dedicated to cut down their services,” he said.

In addition to economic and political stressors, public health workers are trying to address population health in the context of challenging social problems like poverty and discrimination. They are dealing with technological innovations that can be both frustrating and energizing. They also face worker shortages related to budget cuts, non-competitive salaries, and the aging of the workforce. It is estimated that 30-46% of the public health workforce will be eligible to retire in 2006⁷⁻⁸ and the average age of a state public health employee is 47 years.⁹ The workforce has already begun to shrink: in 1980, there were 220 public health workers for every 100,000 people in the population; in 2000 that ratio decreased to 158 public health workers/100,000.¹⁰ It is also likely that work-life balance is a critical issue for public health workers: 85% of all US employees have immediate day-to-day responsibilities for family members, split almost equally between dependent children and aging parents or relatives.¹¹

Structure, Benefits, and People

The University of Minnesota recently released a report on work/life issues that identified three areas that affect stress in a workplace: organizational structure, work/life benefits, and

supervisory practices.¹² Their findings are consistent with those of the National Institute for Occupational Safety and Health (NIOSH)⁵ which reported that, “As a general rule, actions to reduce job stress should give top priority to organizational change to improve working conditions. But even the most conscientious efforts to improve working conditions are unlikely to eliminate stress completely for all workers. For this reason, a combination of organizational change and stress management is often the most useful approach...”

Types of organizational change that can reduce workplace stress include:^{5,12}

- Implement policies that allow for a more flexible work environment, such as telecommuting, compressed work weeks, voluntary reduced-time appointments and job shares that allow employees to more effectively balance their work and home lives;
- Ensure that the workload is in line with employee’s resources and capabilities;
- Design jobs to provide meaning, stimulation, and opportunities to use skills;
- Give employees opportunities to participate in decisions and actions that affect their jobs;
- Improve communications and reduce uncertainty about future career development and employment;
- Eliminate environmental conditions that are unpleasant or dangerous (including crowding); and
- Provide opportunities for social interaction among employees.

Benefits that are family-friendly, such as leave policies that allow for elder care as well as those for the addition of new family members, are important to a predominantly middle-aged workforce. A survey of 800 companies by the William Mercer Company found that 69% of companies offering family-friendly leave policies believed the benefits brought by the policy far exceeded the cost of providing the program.¹³ In fact, more than 50% of the companies believed family-friendly policies had a positive impact on productivity, attendance and morale.



It is also critical that managers uphold family- and employee-friendly policies and maintain a healthy environment. Positive management can also promote health among employees through actions. For example, Mary Sheehan, director of the Community Health Division at the Minnesota Department of Health, appreciates staff dedication but expressed concern that, "If your job is demanding more than 45 hours a week, you have to take a hard look at it." One way she tries to reduce potential employee stress is by monitoring vacation time to be sure that employees take the time they have earned. Sheehan stated that she never allows her own vacation time balance to exceed four weeks. Another way she personally manages stress is through exercising 3-4 times a week before work. In order to make time for this she has given more responsibility to her teenage daughter. Sheehan believes she is modeling good self-care to both her children and her employees.

Steps to Reduce Workplace Stress

NIOSH suggests three steps for the development of workplace interventions to reduce stress:⁵

1. **Identify the problem.** The source of stress should be explored with employees and managers. It is critical to collect information about employee perception of stress, health, work conditions, and satisfaction. Objective measures of absenteeism, illness, turnover rates, and performance reviews should also be evaluated.
2. **Design and implement the interventions.** In smaller organizations, the informal discussions that helped identify the stressors could also be used to identify intervention ideas. In larger organizations, a more formal discussion may be needed (e.g., outside experts). Interventions could be designed for individual departments or the entire agency. Before an intervention is undertaken, employees should be fully informed.
3. **Evaluate the intervention.** This is essential. Establish timeframes for evaluation, using long- and short-term measures. Evaluations should focus on the same types of information that were collected through the problem identification step.

The work environment has the potential to be a place where skills are rewarded, social connections are made, and meaningful professional goals are met. The work of public health is varied, complex, and essential. It is critical to the well-being of society that public health workers develop policies, provide programs, and assess population needs in environments that allow the full expression of their talents and that reward their dedication to service.

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Young Athletes and Asthma

The Minnesota Department of Health has a tool designed to help coaches understand asthma so they can help their players with asthma manage their conditions while succeeding in sports. The Coach's Asthma Clipboard Program "Winning with Asthma," is a free 30-minute online educational program for coaches, referees and physical education teachers. The program is at www.WinningWithAsthma.org.



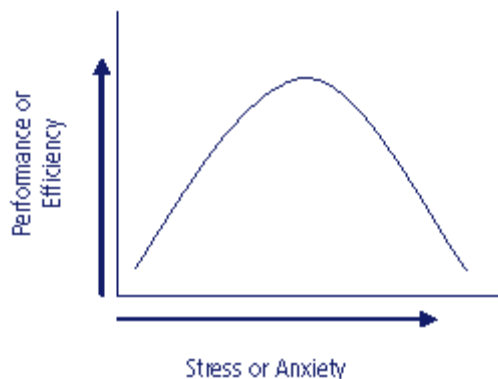
Stress and Efficiency: A Little is Good, A Lot is Not

Heidi Culbert

Stress is a common physiological event and we probably could not work without it. We feel stress when we confront a complex professional problem, deal with a difficult colleague, make a presentation, or strive to meet a deadline. Some amount of stress energizes us and gives us the boost we need to stay focused on our goals. However, too much stress decreases efficiency and, eventually, can affect health. Our bodies become overwhelmed with stress hormones and we may experience anxiety, or even anger; our blood pressure and heart rate may increase.

Yerkes and Dodson first described the stress-performance relationship in 1908. They found that moderately stressed mice learned better than mice that were either not stressed at all or were very stressed. Applying the Yerkes-Dodson Law to humans, it may be most efficient for individuals to experience stress up to a certain point (i.e., the top of the bell curve in the figure) and then actively attempt to evoke a rapid relaxation response to counteract the negative effects of stress. While the “stressed” brain evokes attention and focus, the physiological effects of the subsequently relaxed brain result in prolonged focus that contributes to attention and decision-making. For example, this “relaxation response” may be what contributes to the “aha!” moment that a worker can have when they experience sudden insight into a problem that has been perplexing.

Yerkes-Dodson Curve



Harvard Business School Publishing Corp., 2005

Can People Learn to “Breakout” of Stress?

Herbert Benson, a mind-body researcher, believes it is possible for people to learn how to bring themselves to a height of activity (“stress”) and then rapidly move to a relaxed state in order to stimulate a high level of neurological performance. In his book *The Breakout Principle*, Benson describes four steps to use stress and relaxation to optimize performance:

1. Struggle with a problem. Gather facts, concentrate, put some effort into focusing on the problem in order to reach the peak of the Yerkes-Dodson curve. You can tell when you reach this peak: you will stop feeling productive and will

start feeling stressed. What feels like stress varies among people: some feel anger, some frustration, and some boredom. Sometimes stress makes people want to procrastinate and sometimes it makes them want to do something physical like punch a punching bag.

2. Walk way from the problem. Do something different that produces a relaxation response. According to Benson, there are many ways to trigger the relaxation response such as jogging, petting an animal, viewing art, listening to calming music, taking a short walk, breathing exercises, meditation, etc. You know what works best to relax you. Your brain will quiet down and your body will experience a physiological change that makes you feel better. In a recent interview with the *Harvard Business Review*, Benson said, “...by bringing the brain to the height of activity and then suddenly moving it into a passive, relaxed state, it’s possible to stimulate much higher neurological performance than would otherwise be the case.”

3. Be open to insight and effortless performance. This is the breakout step: some people call this “peak performance” or “being in the zone.” You will feel relaxed as you become immersed in your work; work performance will seem automatic, perhaps effortless. This phenomenon is described by athletes who train themselves to reach this state in order to compete without physiological breakdown.

4. Return to a normal state. It is important to consider that some stress is optimal and that we may be able to manipulate stress—and release ourselves from it—in order to make it work for us. Learning to recognize when stress is no longer productive and interrupting it with a relaxation response can help manage the harmful effects of workplace stress.

To read more about Dr. Benson’s research and techniques see the Mind/Body Medical Institute at: <http://www.mbmi.org>. Information in this article is from: Benson H. Are you working too hard? A conversation with mind/body researcher Herbert Benson. *Harvard Business Review* 2005;83:53-8.

Heidi Culbert is an MPH student in the MCH program.

Recommendations for Developmental Screening

The Minnesota Departments of Human Services, Education, and Health has a new website with recommendations about developmental screening instruments for children ages birth to six: www.health.state.mn.us/divs/fh/mch/devscrn. The recommendations are based on research findings and input from numerous state and national early childhood developmental screening programs and agencies. The website also has information about developmental screening tools and resources for training.

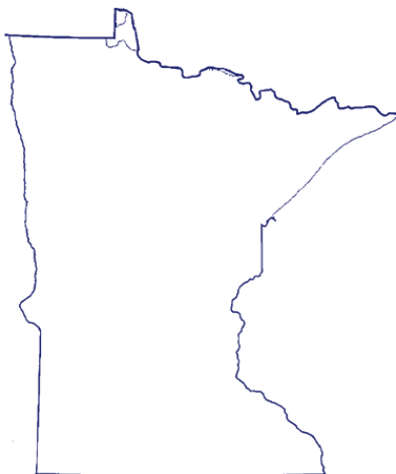
Stress Reduction Strategy: Walk Across Minnesota Challenge



Gillian Lawrence

Worksites can become more employee-friendly, promote health, and reduce stress by implementing special programs, like the Walk Across Minnesota Challenge, a work-based physical activity program to promote physical activity among WIC employees. Sandra Benham, a WIC Nutrition Consultant at the Minnesota Department of Health, and the WIC Nutrition Education workgroup organized it. In addition to enhancing employee health, the program encouraged WIC employees to be physically active role models for their WIC clients. The Walk Across Minnesota Challenge was modeled after a similar program with Washington state WIC employees.

For the Minnesota challenge, groups of six employees teamed up to earn “miles” based on their daily physical activities. These miles took them on a virtual “tour” of Minnesota. During this annual event, teams had five weeks to earn “miles” based on physical activities including walking, running, bicycling, aerobic dance, yard work, and team sports. There were also opportunities for participants to earn bonus “miles” for other health-promoting activities, such as drinking water, eating fruits and vegetables every day, and consuming whole grains. The 651-mile virtual tour began at the steps of the state capitol in St. Paul, went north to Duluth, continued through Walker, Alexandria, and New Ulm, and finally returned to the capitol. Teams reported their daily “miles” to their team captain, who in turn reported the team’s weekly totals to Benham. Each team was also given a large map of Minnesota with which to track their



progress around the state. Benham encouraged teams by sending out weekly mileage updates to all participants. After the five weeks were over, the three teams with the most “miles” won the challenge and a prize related to physical activity.

Benham said the program was “overall very rewarding.” She emphasized that the first Challenge in 2004 involved a lot of work to get the program off and running, especially determining the rules and procedures to use. After working out the details during the first Challenge, the second year’s Challenge was much more streamlined, she said. For example, during the second Challenge, miles were submitted to a website instead of directly to Benham.

“Feedback from staff who participated was very positive,” Benham said. “The Challenge created friendly competition between the teams, each trying to out-do the others. Staff talked about how much fun they had.” Benham emphasized that the program could contribute to job-related stress reduction because, “as we know, exercise reduces stress. This Challenge motivated team members to exercise on a regular basis. Team members motivate each other and remind each other to exercise or adopt the healthy habits. There is a certain amount of camaraderie that is generated by working as a team.”

For more information: The rules for the Minnesota WIC Walk Across Minnesota Challenge can be found on:

<http://www.health.state.mn.us/divs/fh/wic/localagency/walkchallenge/>.

Gillian Lawrence is an MPH student in the MCH program.

National Maternal Nutrition Intensive Course July 26-28, 2006 University of Minnesota Hubert H. Humphrey Center West Bank Campus, Minneapolis, Minnesota

Hot topics of the upcoming conference include:

- Nutrition management of gestational diabetes
- Glycemic index in pregnancy
- Safety of over-the-counter medications and herbal supplements
- Effect of maternal nutrition on brain development in early infancy
- Nutrition needs of preterm infants, including home follow-up
- Weight gain in adolescent pregnancy
- Catch-up growth in infants and young children
- Model programs for reaching teens and recent immigrant populations
- Relationship between oral health and maternal/fetal outcomes

Sessions are available via distance education; all agencies that register for on-site attendance also receive complimentary distance education access for their worksite. Information on the conference is available at: <http://www.sph.umn.edu/publichealthplanet/events/mnic.html>. Registration for the conference will be available in early spring.

Please direct questions or comments to: Jamie Stang, PhD, MPH, RD; NMNIC Conference Director; University of Minnesota, School of Public Health; Division of Epidemiology and Community Health; Ph: 612-626-0351; Email: stang@epi.umn.edu.

Interested in making a difference?

Consider a Master's in Public Health (MPH) Degree in Maternal and Child Health (MCH)



Richard Lussky, MD, is a student in the Master of Public Health (MPH) program in MCH. He is also the co-medical director of the Newborn Intensive Care Unit at Hennepin County Medical Center. His enthusiasm for working in the community earned him the Minnesota Chapter of the March of Dimes' Volunteer of the Year award in 2004 and the Minnesota Medical Association's Community Service award in 2002. The March of Dimes has initiated a

multiyear campaign aimed at decreasing the rate of prematurity, and Dr. Lussky serves as the volunteer chair of the campaign for the State of Minnesota.

Dr. Lussky chose to pursue the MPH program in MCH because of "the outstanding national reputation of the University of Minnesota in general and the School of Public Health in particular." In addition, the MCH program fits well with Dr. Lussky's professional expertise in neonatology and newborn medicine.

Dr. Lussky is passionate about decreasing the rate of prematurity, addressing disparities in health outcomes, especially in perinatal health, and collaborating with communities to address the social determinants of health. He would eventually like to work at the state or federal level to affect MCH policy decisions and thus have a greater impact on population health. He feels that his coursework in MCH is giving him the tools he needs to accomplish this goal: "The scientific background I gained from the MCH curriculum makes me more effective in advocating for change and working in the field of public health, and gives me a better understanding of the importance of community involvement in health policy and program development, and the social determinants of health."

Dr. Lussky's experience with the MCH program has been "overwhelmingly positive." According to Dr. Lussky, "the program has been tremendously helpful in accommodating me as a working

professional with a family life; the school works hard to help those students who are working full time by offering a variety of course options, times, dates, and online options."

Looking ahead, Dr. Lussky sees an exciting future for MCH professionals filled with potential. Although his medical training provided a "traditional health care provider" perspective, he believes that his MCH training is consistent with the changes that need to happen in all areas of health care, including public health. This training has emphasized interdisciplinary collaborations and health initiatives that focus not only on individuals, but on systems, environments, and social conditions. Dr. Lussky has spent much of his career caring for the most vulnerable newborns and infants. He looks forward to a future where his contributions and those of his colleagues in public health, translate into more healthy pregnancies and a reduction in the number of infants who enter the world through a neonatal intensive care unit.

What is the Maternal and Child Health Program? An MPH training program about promoting and preserving the health of families, women, children, and adolescents. It is in the Division of Epidemiology and Community Health in the School of Public Health at the University of Minnesota.

Who are the faculty? The MCH faculty is multidisciplinary (e.g., epidemiology, medicine, nursing, psychology, sociology, nutrition) and focuses on children with chronic health conditions; reproductive health and family planning; pregnancy outcomes; social inequities in health; women's health; infectious diseases; substance use; and child, adolescent, family, and community health promotion, risk reduction, and resiliency.

Who should apply? People who care about vulnerable populations and want careers in program planning and development, evaluation, surveillance, assessment, teaching, or research. The program offers a special emphasis on MCH epidemiology for interested students. Clinical professionals, and others with advanced degrees may have the option of completing the two-year MPH Program in one year.

For further information about the MCH Program, call 612-626-8802 or 1-900-774-8636; e-mail gradstudies@epi.umn.edu; or visit www.epi.umn.edu/mch/academic/ or www.sph.umn.edu.

Stay in the Know! Join our MCH Leadership Education Center Listserv!

Do you ever have a question that you know someone in your field could answer if you could only connect with him or her? Have you ever had a great success that you know would be helpful for colleagues to hear? Have you ever sponsored a program that you know would attract more people if you only knew how to share the event with others? Would you like to receive announcements, research updates and links to publications via email?

The Maternal and Child Health Program in the Division of Epidemiology and Community Health in the School of Public Health at the University of Minnesota sponsors the *cyfhealth* listserv to enhance networks between professionals working to improve the health and well-being of children, adolescents and their families.

The listserv can be used to share ideas, new research developments, resources, and event announcements. In addition, the listserv helps inform academicians of the training needs of public health practitioners.

To sign up for the listserv, send an email message to: cyfhealth-request@epi.umn.edu. In the body of the text write: SUBSCRIBE *cyfhealth*.

If you have problems with the subscription process, you may also send an email to pearson@epi.umn.edu requesting to be subscribed.

New Report Measures Work Environment State by State



Diane Benjamin, MPH

A recent report about work environments found that Minnesota ranked third best among states for job opportunities, job quality, and workplace fairness. *Decent Work in America*, published by the Political Economy Research Institute at the University of Massachusetts Amherst, developed an index of the following factors that contribute to the overall work environment:

- **Job Opportunities** includes unemployment rates, and rates of “involuntary part-timers” – people who accept part-time jobs only because they can’t find full-time employment;
- **Job Quality** includes figures on average wages in each state, adjusted for cost-of-living, and the proportion of workers who receive health and retirement benefits;
- **Workplace Fairness** measures the proportion of low-income workers (who earn less than 50 percent of the national average wage, after adjusting for cost-of-living differences) and the degree of pay equity among men and women. This category also considers each state’s minimum wage, the degree to which collective bargaining is permitted in the public sector, and whether states have “right to work” provisions.

The study ranked states on a scale of 1 to 100, and revealed vast differences in scores between states. Delaware, the highest ranking state, had a score of 89; Louisiana, the lowest ranking state, had a score of 31. Other high-ranking states included New Hampshire, Vermont, and Iowa. Lowest-ranking states included Mississippi, South Carolina, and Texas. Wisconsin, South Dakota, and North Dakota were ranked seventh, tenth, and eleventh respectively. Minnesota ranked third.

The study also questioned whether states that ranked higher on work environment suffered in terms of overall economic performance. The study looked at three basic indicators of a state’s business conditions: overall economic growth, the rate of new business formation, and the rate of job growth. States that were ranked better for their work environments also were more likely to have better economic growth. There was no relationship between business start-ups or the overall job growth and a state’s work environment ranking.

The full report, along with tables and maps, is available from the Political Economy Research Institute at: <http://www.umass.edu/peri/programs/labormarkets/labormarkets.htm>

Diane Benjamin, MPH is the Outreach Director for the Center for Leadership Education in Maternal and Child Public Health.

State	Overall Work Environment Score
Delaware	89
New Hampshire	81
Minnesota	80
Vermont	77
Iowa	73
Wisconsin	71
South Dakota	70
North Dakota	69
Mississippi	36
South Carolina	36
Texas	33
Louisiana	31

Web-Based Resources on Job Stress and Burnout

American Institute of Stress. <http://www.stress.org> Developed for a general audience in conjunction with the American Psychological Association’s (APA) Mind/Body Health campaign.

Center for Spirituality and Healing, University of Minnesota. <http://www.csh.umn.edu/> Workshops, events and classes focused on stress-reduction, healing and meditation from a recognized leader in integrative medicine, bringing together biomedical, complementary, cross-cultural, and spiritual care.

Dr. Robert Veninga presentations. Dr. Veninga is a Professor in the School of Public Health at the University of Minnesota. His area of expertise is occupational stress.

- “Managing Hope in the Workplace” (audio and PowerPoint presentation) <http://www.epi.umn.edu/mch/Summer/2004.shtm>
- “Job Stress and Public Health (Video presentation)

Institute on Women’s Policy Research. http://www.iwpr.org/Work/Research_work.htm Information about research on public policy affecting work and family, including paid family and medical leaves.

Job Stress Network/Center for Social Epidemiology. <http://www.workhealth.org/> Evidence-based resources about job strain and a job strain questionnaire.

The National Partnership for Women and Families. <http://www.nationalpartnership.org> Information on the Partnership’s work-life policy advocacy, such as ending sexual harassment, prohibiting pregnancy discrimination, and passing family and medical leave legislation.

Peer-reviewed journals. On-line abstracts or full texts of occupational health (including job strain) studies:

- Journal of Occupational and Environmental Medicine <http://www.joem.org>
- Scandinavian Journal of Work, Environment & Health <http://www.sjweh.fi/index.php>
- Journal of Occupational Health Psychology <http://www.apa.org/journals/ocp/>

University of Minnesota Extension Services. <http://www.extension.umn.edu/distribution/familydevelopment/DE7269.html> A series of “briefs” about worksite and general stress.

WebMD. http://my.webmd.com/content/pages/71674_52144.htm?z=1674_8100_5002_fl_08 Information about general stress and job burnout.

Workaholics Anonymous. <http://www.workaholics-anonymous.org> A support group for “workaholics” similar to Alcoholics Anonymous.

Save these dates for upcoming Twin Cities' conferences ...



UPCOMING
EVENTS

March 7, 2006: Minnesota Health Services Research Conference. *Understanding the Connection between Poverty and Health: Does Health Services Research Matter at the Margin or the Core?* University of Minnesota School of Public Health. Brochure: www.hsr.umn.edu.

May 4-5, 2006: *15 Years of Bringing the Pieces Together.* Minnesota Organization on Pregnancy, Prevention and Parenting. Information: <http://www.moappp.org/training/conference.html>.

May 19, 2006: MCH One-Day Seminar: *Successful Communications: How to Strategically Frame Messages to Create Change.* University of Minnesota, Maternal and Child Health Program, Division of Epidemiology, School of Public Health. Brochure will be available in April. To ensure you are on our mailing list, email: pearson@epi.umn.edu.

July 26-28, 2006: *The 2006 National Maternal Nutrition Intensive Course at the University of Minnesota.* Brochure: www.publichealthplanet.org/mni

July 31- August 2, 2006: *Summer Institute in Adolescent Health — Engaging Youth in Health Promotion: Educating in New Directions.* Co-sponsored by the University of Minnesota Center for Adolescent Nursing, Healthy Youth Development Prevention Research Center, MOAPPP, and the Minnesota Department of Education. Contact: Mike Edie, medie@umn.edu.

HealthyGenerations is published three times each year by the Center for Leadership Education in Maternal and Child Public Health. This issue's editor is Wendy L. Hellerstedt, MPH, PhD, Director of the Center. For subscription changes, requests for bulk copies, or for more information, contact Jan Pearson at pearson@epi.umn.edu.

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Supported in part by the
Maternal and Child Health Bureau
Health Resources and Services Administration
US Department of Health and Human Services

