Behavior

Working women's job strains

Behold the workplace, a 9-to-5 jungle overgrown with bonehead bosses, surly coworkers, creeping deadlines, and endless bureaucratic forms. Many employees fend off such perils with a fair amount of success, but a new study suggests that some working women instead experience severe job strain, depression, anxiety, anger, and social isolation, all of which have been shown to contribute to a range of physical health problems.

Other investigations have noted that heart disease disproportionately afflicts and kills men who experience a lot of job strain and few social ties.

"Health-damaging psychosocial factors . . . tend to cluster in certain individuals," contend psychiatrist Redford B. Williams of Duke University Medical Center in Durham, N.C., and his colleagues. "[Our] study addresses the need for expanded research on the effect of job strain among women workers."

Williams' group administered a battery of job-related and psychological questionnaires to 152 women working in either the customer service or paperwork-processing department of a large corporation.

A set of health-damaging traits emerged strongly in 32 women, the scientists report in the June ARCHIVES OF GENERAL PSYCHIATRY. These characteristics consisted of high levels of depression, anxiety, and anger; few social contacts; far more negative than positive feelings about supervisors and coworkers; a minimal sense of fitting in and being needed at work; and little curiosity about other people or new ideas.

The clustering of these attributes compounds each one's destructive effects on physical health, the researchers argue. However, it is unclear whether women in the study experienced severe job strain before or after the emergence of depression and other psychological attributes.

Further studies need to examine job strain and psychological distress in women holding professional and executive positions, the Duke researchers add. *—B.B.*

Social life nothing to sneeze at

In the battle against the common cold, heavy doses of social interaction may provide as much or more help than such time-honored balms as plenty of rest and orange juice.

Individuals who move in a wide circle of family members, friends, and acquaintances gain powerful protection against infection with cold viruses, report psychologist Sheldon Cohen of Carnegie Mellon University in Pittsburgh and his coworkers.

The physiological basis of the protection sparked by diverse social ties remains unclear, the scientists note in the June 25 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Cohen is also conducting studies of monkeys aimed at illuminating the ways in which social standing affects susceptibility to infection (SN: 6/21/97, p. 381).

The new study consists of 125 men and 151 women, all in good physical health and ranging in age from 18 to 55. Volunteers first reported the extent to which they interacted with other people, including spouses, parents, children, friends, coworkers, and fellow members of various volunteer and religious groups. They then received nasal drops containing a cold virus. For the next 5 days, participants were housed individually and allowed to interact with each other only at a distance of at least 3 feet.

During that time, physiological signs of viral infection and obvious cold symptoms rose sharply among those who had cited the fewest types of social relationships, the investigators report. This pattern held regardless of age, sex, race, amount of education, or whether trials occurred in the fall or the spring. Cigarette smoking, sleep problems, alcohol abstinence, low vitamin C intake, and being introverted accounted only in part for the run of colds in socially restricted folks. *—B.B.*

Biology

Penguins face a poultry virus . . .

Penguins inhabiting the farthest reaches of Earth would seem to be safe from many of the ills that plague other wildlife. Recent research on these birds shows otherwise, however.

In the May 15 NATURE, a group of Australian researchers reports finding signs in wild Antarctic penguins of a viral pathogen that has recently become widespread in the poultry industry in the Northern Hemisphere. The virus attacks the immune system of young chickens and can be fatal. The penguins examined did not appear to be sick, but the researchers found antibodies to the pathogen, known as infectious bursal disease virus, in blood samples of 65 percent of 52 emperor penguin chicks.

The penguins live in colonies close to the Mawson research base. In contrast, Adélie penguins living in a more remote colony showed no signs of the virus.

Veterinary biologist Heather Gardner of Australia's Environment, Sport, and Territories Department was prompted to screen for the virus and other avian pathogens after a massive number of Adélie chicks, more than 20,000, died three summers ago in the Mawson region. Although disease was ruled out as the cause in that episode, Gardner says "we needed to know more about disease in birds in Antarctica, particularly in light of . . . increasing numbers of people visiting penguin colonies."

The researchers suggest that the hardy poultry virus may have been carried into Antarctica on food supplies and picked up by scavenging birds such as skuas, which transmitted it to the nearby penguin colony. *—C.M.*


R. Monastersky

Emperor penguins in Antarctica have been exposed to a pathogen that kills young chickens.

. . . and threats to food supplies

The culprit in the massive die-off of Adélie chicks in Antarctica 3 years ago was probably starvation, says Heather Gardner of Australia's Environment, Sport, and Territories Department. Her observations suggest that foraging adult penguins were not bringing enough food back to the colony.

Zoologist Dee Boersma of the University of Washington in Seattle has observed signs of food shortages among penguins in Argentina. At the June meeting of the Society for Conservation Biology in Victoria, British Columbia, Boersma described the surprisingly long-distance travels of Magellanic penguins from the Punta Tombo colony on the Atlantic coast.

In earlier studies, these temperate-zone penguins appeared to fish close to shore. When Boersma and her colleagues recently tracked by satellite two males tagged with radio transmitters, they found the penguins going hundreds of miles out to sea.

The powerful swimmers feed on squid, anchovy, and other small fish. During nesting season, adults must frequently shuttle back to the colony to provide chicks with regurgitated fish. Boersma suggests that increases in commercial fishing in the southern Atlantic Ocean have made near-shore food supplies scarce for the penguins, sending them farther out for provisions.

The penguin population at the colony dropped by about 20 percent between 1987 and 1995, although it increased slightly last year. Chicks have the highest mortality rates, and getting sufficient food is the most important factor in their survival, Boersma has found. Oil slicks from tankers pose another threat.

Understanding the penguins' foraging habits is important for conserving them, Boersma and David L. Stokes write in a paper to be published in MARINE ORNITHOLOGY. Although a near-shore reserve around the colony has been proposed, it may not be effective if the birds range far offshore. *—C.M.*