Immigrants Go from Health to Worse

People from around the world flock to the United States expecting to find a better life. But to scientists' surprise, a growing body of evidence indicates that increasing familiarity with U.S. culture and society renders immigrants and their children far more susceptible to many mental and physical ailments, even if they attain financial success.

The latest study of this phenomenon, directed by epidemiologist William A. Vega of the University of Texas, San Antonio finds much higher rates of major depression, substance abuse, and other mental disorders in U.S.–born Mexican-Americans compared with both recent and long-standing Mexican-American immigrants. This pattern held regardless of education or income levels.

Vega's results, published in the September ARCHIVES OF GENERAL PSYCHIATRY, appear at the same time as the release of a national report on declining physical and mental health in children of immigrant families. A panel convened by the National Research Council and the Institute of Medicine, both in Washington, D.C., reviewed previous studies and concluded that assimilation into a U.S. lifestyle may undermine the overall health of immigrant children much more than being poor does.

In contrast, studies of nonimmigrant U.S. residents usually link poverty to poor physical and mental health.

"The material on immigrant health shocked me when we first reviewed it," says panel member Arthur M. Kleinman, a psychiatrist and anthropologist at Harvard Medical School in Boston. "Vega's study is consistent with the panel's conclusion that immigrants' health deteriorates with assimilation to U.S. society," declining toward general U.S. norms, says Kleinman. Other studies have indicated that citizens of many countries, including Mexico, are healthier overall than U.S. citizens.

Vega's team interviewed 3,012 adults of Mexican origin, ages 18 to 59, living in Fresno County, Calif. Of that number, 1,810 people identified themselves as immigrants. Interviews were in English or Spanish. Interviewers expressed an interest in health issues only and tried to minimize any tendency of participants to lie—due to U.S. residency concerns—about having immigrated.

Nearly one-half of U.S.–born Mexican-Americans had suffered from at least one of 12 psychiatric disorders at some time in their lives, compared with only one-quarter of the immigrants. Common mental conditions in U.S.–born individuals included major depression, phobias and other anxiety disorders, and substance abuse and dependence.

Prevalence rates for mental disorders were lowest for those who had immigrated within the past 13 years. The higher rates found among immigrants of 13 or more years still fell considerably below those for the native-born group.

Immigrants may constitute a hardy group willing to carve out new lives in a foreign land. However, immigrants in Vega's study showed mental-disorder rates similar to those of Mexico City residents.

A related study of 1,500 public health care users in California, conducted by psychiatrist Javier I. Escobar of the RWJ Medical School in Piscataway, N.J., reports lower rates of depression and post-traumatic stress disorder, as well as better physical health, in Mexican and Central American immigrants than in U.S.–born Hispanics. Nonetheless, immigrants were poorer than the U.S. natives, Escobar's team reports in an upcoming BRITISH JOURNAL OF PSYCHIATRY.

Physical and mental health advantages for immigrant families vanish by the third generation of children born in the United States, according to the panel report. Reasons for the initial strength and later decline of immigrants' health are not clear, says Vega's group.

Close-knit extended families and cultural injunctions to eat nutritious foods and avoid drugs and divorce may safeguard the health of recent immigrants from Mexico, Escobar suggests. Increasing social isolation and the loss of stable religious affiliations may later herald health declines, Kleinman proposes. *—B. Bower*

Do blind people track sounds better?

Folk wisdom holds that the blind can hear better than people with sight. Scientists have a new reason to believe it.

Research now indicates that blind and sighted people display the same skill at locating a sound's origin when using both ears, but some blind people can home in on sounds more accurately than their sighted counterparts when all have one ear blocked. Canadian scientists describe the work in the Sept. 17 NATURE.

Participants in the study were tested individually in a sound-insulated room. They faced 16 small, concealed loudspeakers arrayed in a semicircle a few feet away. With a headrest keeping their heads steady, the participants pointed to the perceived origins of the sounds.

The researchers tested eight blind people, who had been completely sightless from birth or since a very early age. They also tested three nearly blind persons, who had some residual vision at the periphery of their gaze; seven sighted people wearing blindfolds; and 29 sighted people without blindfolds. All participants were tested beforehand to ensure that their hearing was normal.

When restricted to one-ear, or monaural, listening, four of the eight blind people identified sound sources more accurately than did the sighted people, says study coauthor Michel Paré, a neuroscientist at the University of Montreal. The sighted people showed especially poor localization of sounds from the speakers on the side of the blocked ear.

In sighted people who can hear with both ears, "the brain learns to rely on binaural [stereo] cues. These data suggest that blind people haven't learned that and keep monaural cues as the dominant cues," says Eric I. Knudsen, a neurobiologist at Stanford University School of Medicine. "I find it surprising."

In blind people, some parts of the brain that would otherwise process visual images might be reorganized to process auditory messages, says Helen J. Neville, a cognitive neuroscientist at the University of Oregon in Eugene.

Ironically, such reorganization, also called plasticity, may account for the poor performance of the partly blind people in this study, says Tim P. Pons, a neuroscientist at Wake Forest University in Winston-Salem, N.C. These participants fared worse than either the blind or sighted groups, whether an ear was blocked or not. In these individuals, plasticity may have caused the visual cortex in the brain to devote itself not to hearing but to peripheral vision, the only sight remaining, Pons suggests.

In 1996, a U.S.–Japanese team found that blood flow in the visual cortex of blind people increased when they read Braille, a tactile activity, even though the main tactile sensory region sits apart from the visual cortex.

This and the Canadian report fuel an ongoing scientific debate about the hearing capabilities of the blind. "I think these studies show that the folklore probably has some element of truth," Pons says. Such compensatory change in the brain "makes sense from a Darwinian perspective—to increase the capacity to use the remaining senses better increases your chances of survival," Neville says. *—N. Seppa*