

Latchkey children doing okay

Large numbers of children do not go home to Mom at the end of the school day. Because Mom is still at work, some children go to day care centers, some go to baby-sitters and some, called "latchkey" children, go home alone or with siblings. Researchers who conducted a survey of 349 third graders in an affluent Dallas suburb report that one child out of four has no adult supervision after school; but these latchkey children do not demonstrate poor social, emotional or intellectual development, as an earlier study had suggested.

For the child whose mother is not at home, self-care (or sibling care) was found to be the most common after-school arrangement regardless of race, social class or parents' marital status. Deborah L. Vandell of the University of Texas at Dallas-Richardson and her colleagues recorded how the children view themselves and how their peers, teachers and parents view them. They found that latchkey children appear to be functioning similarly to the children who go home to their mothers. But surprisingly, children who go to a day care center were viewed more negatively by peers and were rated by parents and teachers as having poorer study skills.

Vandell suggests several interpretations of these results. One is that the different arrangements may be directly responsible for the observed differences. For example, the particular day care centers may be inappropriate for this age group. She notes that the children complain the centers are "for babies." Another possibility is a preexisting difference in the children in the different situations. "It may be that these third graders' parents only used a latchkey arrangement for those children they felt had sufficient maturity and responsibility," Vandell says.

"There is a danger in applying our results wholesale," she cautions. "Latchkey care may not be good for all children... but our results suggest it is not inevitably harmful."

Sex differences on the chromosome map

Gene by gene, biologists are plotting the map of the human chromosome, and the work is progressing rapidly. "We now expect complete maps of all of the human chromosomes in three to five years," says Raymond White of the University of Utah Medical Center in Salt Lake City. The distances on these genetic maps represent the probability that a chromosome will break between two genes and the pieces will recombine with the corresponding pieces of the partner chromosome. Such recombination may occur several times on each chromosome during meiosis, the cell division process that produces egg and sperm. The farther apart two genes are on a chromosome, the more likely it is that recombination will occur between them.

Maternal and paternal chromosomes have different maps, White reports. He says this finding is the most surprising outcome of the mapping work so far. In some pairs of chromosomes, the maternal chromosome appears longer than the paternal one, according to the recombination analysis used for genetic mapping, and in other pairs the paternal chromosome appears longer than the maternal. Because the chromosomes of each pair (except X and Y) are physically the same length, it must be the recombination rate that differs. White reports, for example, that recombination in the short arm of chromosome 11 is about three times as frequent in males as in females, but recombination in chromosome 13 is more frequent in females than in males.

"The biochemical basis of these observations is obscure; the evolutionary basis is also," White says. One possible explanation is that there might be sex differences in the enzymes that carry out recombination such that they act preferentially at different sites on chromosomes. White speculates that some areas of chromosome may have more of the sites recognized by enzymes in the male, and other areas may have more of the sites recognized by enzymes in the female.

Bladder problem solving

Interstitial cystitis is an uncommon bladder disease diagnosed more often in women than in men. Its symptoms are pain and a frequent and urgent need to urinate, but unlike the more common bacterially induced cystitis, says urologist Edward Messing of the University of Wisconsin in Madison, its cause "is completely unknown at this time." A battery of treatments have been tried with little success.

In the past the chronic condition has been ascribed to emotional stress, but urologists now suspect a physiological cause. Researchers who believe the problems arise from the destruction of a protective mucous coating in the bladder have had some success using treatments that restore the lining. C. Lowell Parsons of the University of California at San Diego has used an anticoagulant that coats the bladder wall, and at the recent American Urological Association (AUA) meeting in Atlanta, Larrian Gillespie, who runs an interstitial cystitis clinic in the Los Angeles area, reported positive results with a three-drug regimen.

In initial trials using the anticoagulant on 24 people, Parsons found that 22 experienced a significant decrease in pain. At the AUA meeting, he described successful use of the drug, not yet approved for use in the United States, in five patients with a similar type of cystitis induced by radiation given to treat cervical carcinoma.

Gillespie believes damage to the mucous layer from bacteria, antibiotics, hormonal changes or surgery can cause interstitial cystitis by allowing urine to interact with bladder wall cells. She uses a combination of an anti-inflammatory drug, an alkaline agent to counteract the urine's acidity, and DMSO to carry the drugs into the cells. Of 145 patients treated, 108 became symptom free and another 21 achieved relief after receiving additional medication to block pain receptors.

Gillespie's therapy needs to be compared with a placebo, substantiated and reproduced before it can be considered a cure, cautions Messing.

What'dja say?

Occupational Hearing Services (OHS), a hearing education company, estimates that 20 percent of the U.S. population has a hearing loss or ringing in the ears, mostly from exposure to loud noise. Often the hearing loss is so subtle that the people around the victim notice it first—the person with the problem is the last to know. The company sponsors a telephone hearing test through hospitals and hearing clinics across the United States. Callers dial a local number (using a high-quality phone) and listen for several tones. To find the number nearest you, write OHS, Dept. of Public Affairs, 16 S. Orange St., Media, Pa. 19063 or call (215) 565-6114.

OSTP on the NIH

Congress approved funding for 6,500 National Institutes of Health (NIH) grants for fiscal year 1985, but the Reagan administration has been trying retroactively to pare that number down to 5,000 (SN: 2/9/85, p. 85). In the May 30 *NEW ENGLAND JOURNAL OF MEDICINE*, Presidential Science Adviser George A. Keyworth II and Bernadine Healy of the Office of Science and Technology Policy (OSTP) claim the concern with numbers clouds more important issues.

Before fiscal '85, they note, the funding of 5,000 new grants a year was traditional. Congress's habit of earmarking funds for specific research has also lent to the perception that grants are shrinking, and has had the effect of force feeding some programs for political reasons, while better science goes unfunded. All this talk about budget uncertainties, they say, may scare young people away from careers in biomedical research.