

Parental Behavior, TV Habits, IQ Predict Aggression

In what its authors call the longest follow-up study ever done on human aggressive behavior, key factors in the metamorphosis of childhood aggression into adult crime have been traced in more than 400 males and females. The researchers, who began their study of 875 third graders in Columbia County, N.Y., in 1960, have found what might be expected: that youngsters who act in ways that injure others at age 8 have much higher rates of criminal and violent behavior at age 30.

But more interesting, according to the researchers, was the pinpointing of certain family and behavioral factors that seem to contribute most to the development of aggression. In addition, the scientists identified a curious interplay between intelligence and aggressive behavior. The results were presented last week in Anaheim, Calif., at the annual meeting of the American Psychological Association.

According to the study, the two "best predictors" of later aggression and violence are:

- How the child "learns" to be aggressive. Those who are punished more harshly, and rejected more often by their parents, learn to deal with others in the same way.
- The violence level of television programs the child watches. The more violent the program, the more aggressive the child.

"Of course there are many other factors involved—genetics, biology and others—but we feel we have found some key family and environmental contributors," says Leonard D. Eron of the University of Illinois at Chicago Circle, who headed the multi-institutional study team.

The researchers also found that aggression was correlated strongly with lower IQ scores in children and lower "intelligence performance" (as measured by reading, spelling and arithmetic tests) in adulthood. But perhaps more important, they found that high aggressiveness seemed to inhibit intellectual achievement at ages 19 and 30 (the two follow-up ages in the study). "Regardless of IQ at age eight, higher aggression will stifle intellectual achievement in adulthood," says L. Rowell Huesmann, also of the University of Illinois.

In the original study in 1960, the researchers assessed aggressiveness through interviews with a child's peers and parents and with the child directly. In the subsequent follow-up—409 of the original subjects were traced down—they interviewed the subjects and studied criminal justice records in New York state. Among males, they found a direct, incremental relationship between childhood aggression and adult aggression, includ-

ing crime: of the upper 25 percent of aggressive 8-year-old boys, 23 percent had been convicted of a crime by age 30; this contrasts with a 9.3 percent adult conviction rate among those who had been in the lower 25 percent of the childhood aggressive group. In addition, they found higher rates of psychopathology in men who had been rated most aggressive at age 8.

Though the scientists did not deal directly in this study with possible preventive measures, they said that any such measures must begin very early with both parents and children. "It seems evident that age 8 may be too late," says Leopold V. Walder of Behavior Science Consultants in Greenbelt, Md. If such "isolated" children can be identified early, psychologists might foster greater family closeness and actually change the child's learning patterns, he suggests.

"Theoretically, it might be possible to

screen such children at the nursery-school level," says Monroe M. Lefkowitz of Long Island University. While acknowledging that such a program might cost a lot of money, Lefkowitz says this must be balanced against "the cost of crime being committed now. We have become a garrison society, particularly in urban areas."

Eron noted that this and other studies have consistently found that girls are less aggressive than boys. "There may be some genetic factor to this, but there is also some psychology," he said, noting that boys are generally taught that the "macho" ethic of using physical force is a desirable one. "Some of the people in the women's movement have it all wrong," says Eron. "They want to treat girls like boys. But we already have 50 percent of the population [males] that is aggressive—why make it worse? Maybe we should train our boys to be more like girls." —*J. Greenberg*

Giving it up—at the cellular level

Physicians have for years testified to the importance of patients' attitudes in controlling the progression of serious disease—the well-known "will to survive." But despite the considerable anecdotal evidence, scientists have made little progress in understanding the actual pathways from mood to good, or poor, health. Government scientists have now reported preliminary evidence linking apathy in young cancer victims to diminished activity by a particular kind of cell that watches out for, and fights, tumors.

Psychologist Sandra M. Levy and immunologist Ron Herberman of the National Cancer Institute (NCI) in Bethesda, Md., studied 75 women with breast cancer (half were treated with mastectomy, while the other half had undergone exploratory surgery and were facing treatment with radiation) to explore associations among age, psychological distress, attitude and the activity of an immunological cell called the natural killer, or NK, cell. The NK cell has been implicated not only in fighting tumor growth, but also in the body's natural surveillance for new tumors.

As Levy reported this week at the American Psychological Association meeting, there appears to be significant and complex interaction among age, immune function, type of treatment and a psychological measure of "fatigue." Specifically, the younger patients facing radiation therapy and reporting high levels of fatigue were the only patients with significantly compromised immune functions. There is no reason for these patients to show diminished NK activity, according to Levy; indeed, immune activity normally

decreases with age. All of the women had gone through surgery, and radiation therapy had not yet begun, so it would appear, Levy said, that psychological distress (perhaps resulting from knowing that they were still cancerous) plays a role in their patients' diminished NK activity.

Levy speculates that "fatigue" represents something unique for this particular population of patients; perhaps it should be interpreted as a reflection of passivity or a perception of helplessness. It is possible, she suggests, that young patients respond to the stress of serious illness with apathy and that this unwillingness to fight diminishes the body's natural resistance to tumor growth. Only three patients had had a recurrence of breast cancer 18 months into the study, but two of those three were from this young group, one of whom had died.

These results are particularly interesting when contrasted with results of another study, Levy said. Working with NCI's Marc Lippman, Levy studied a group of patients who had already had their first recurrence of breast cancer—women whose chances for survival were quite poor. They found that patients who reported high levels of psychological distress had the best chance of still being alive one year later; those who died within a year had generally reported fewer psychiatric symptoms. Psychological distress seems to give "fight" to patients facing imminent death, where in younger patients it may defeat the will to survive, suggesting, Levy concludes, that it may ultimately prove difficult to generalize about the mind-body connection. —*W. Herbert*