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Press information

Is There a Long-term Link Between Childhood Environmental Harshness and Health?

A study, conducted by Coralie Chevallier, Inserm researcher at Unit 960 "Cognitive Neuroscience Laboratory" (Inserm/ENS), suggests that an unfavorable childhood environment leads to earlier reproduction and a decreased effort in looking after health during the course of life. These findings have been published in [*Evolution and Human Behavior*](#).

Current models derived from evolutionary biology show that it can be advantageous for an organism living in a harsh environment (with low levels of resources or high levels of stress or violence) to adopt behaviors favoring benefits in the short term. While these benefits are more modest than those obtained over the long term, they are at least more certain. As such, the receipt of signals by a juvenile organism indicating that the environment is dangerous leads it to adapt its strategy in favor of reproducing sooner - to the detriment of longer-term investments in body maintenance and repair.

On the basis of this observation in animals, Coralie Chevallier, Inserm researcher at the "Cognitive Neuroscience Laboratory" of the École Normale Supérieure (ENS) in Paris, conducted a study to determine whether this model could be applied to humans. To do this, she and her team selected a panel of 1,000 men and women, between the ages of 19 and 87, and representative of the French population.

The panel members answered a series of questions concerning, for example, their age, gender, household composition, socioeconomic status and level of education. They then received a second questionnaire addressing three main themes:

- childhood environment: parental involvement, upbringing, personal experiences, family difficulties, etc.;
- reproductive strategy: number of children, age at first pregnancy, age of first sexual intercourse, and number of short-term partners;
- state of health: body mass index (BMI), how they feel about their health, their desire to remain in good health, and tobacco consumption.

Analysis of these data shows a link between childhood environmental harshness and health and reproductive strategy, with sexual activity starting earlier, the first child being born at a younger maternal age, and poorer health in adulthood (overweight, smoking, etc.). In other words, reduced investment in health is indeed associated with a reproductive strategy that is advantageous in the short term, and these behaviors are associated with an unfavorable childhood environment.

These results therefore suggest that behaviors we could have *a priori* considered unrelated are actually part of more general strategies that adapt according to the environment. According to Coralie Chevallier, this research is important for the public authorities: "the exposure to harsh environments during childhood has major consequences throughout life and should be the subject of targeted public policies."

Sources

Childhood Environmental Harshness Predicts Coordinated Health and Reproductive Strategies: A Cross-sectional Study Of A Nationally Representative (France) Sample.

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[Evolution and Human Behavior](#)

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