Effects of Environmental Enrichment at Ages 3–5 Years on Schizotypal Personality and Antisocial Behavior at Ages 17 and 23 Years


OBJECTIVE: Methods to prevent two major mental disorders, schizophrenia and conduct disorder, have been elusive. This study assessed the effects of an early nutritional, educational, and physical exercise enrichment program on adult outcome for schizotypal personality, conduct disorder, and criminal behavior.

METHOD: Eighty-three children were assigned to an experimental enrichment program from ages 3 to 5 years and matched on temperament, nutritional, cognitive, autonomic, and demographic variables with 355 children who experienced usual community conditions (control group). Both self-report and objective measures of schizotypal personality and antisocial behavior were obtained when the subjects were ages 17 and 23 years.

RESULTS: Subjects who participated in the enrichment program at ages 3–5 years had lower scores for schizotypal personality and antisocial behavior at age 17 years and for criminal behavior at age 23 years, compared with the control subjects. The beneficial effects of the intervention were greater for children who showed signs of malnutrition at age 3 years, particularly with respect to outcomes for schizotypy at ages 17 and 23 and for antisocial behavior at age 17.

CONCLUSIONS: The results are consistent with an increasing body of knowledge that implicates an enriched, stimulating environment in beneficial psychological and behavioral outcomes. These findings have potential implications for the prevention of schizophrenia and criminal behavior.
Criminals to be fed vitamins to improve behaviour
Gaby Hinsliff, chief political correspondent
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Criminals are to be given vitamin supplements in an unusual attempt to reduce anti-social behaviour which will test the effect of diet on the brain.

The move is controversial, with many in the prison service sceptical that healthy food could make much difference to hardened criminals.

The proposals being drawn up within the Home Office reflect a growing interest in the potential link between junk diets laced with additives and disturbed or hyperactive behaviour. American research has shown a link between poor diet and aggressive or impulsive tendencies, including a recently published US study of young children from Mauritius which found they were significantly less likely to grow up to have criminal records if fed an enriched diet from a young age.

The Youth Justice Board is helping to organise the British trial, which would involve young offenders who are serving community sentences, or who have recently been released from jail, being given daily supplements of fatty acids, trace minerals and vitamins to see if it reduces anti-social behaviour.

'We have agreed to assist them by facilitating access to young people where necessary,' said a spokesman. 'We are interested in seeing the results of this.'

The project raises ethical questions. While only volunteers will take part, if dramatic results from changing offenders' diets can be shown, that will raise the question of whether prison diets should be altered to 'dose' prison inmates into better behaviour.

Conversely, the approach is likely to be attacked by right-wing critics as allowing offenders to escape responsibility for their own crimes by blaming their diets.

However, a small previous study of teenagers in a young offenders' institution carried out by the research charity Natural Justice, found that boosting offenders' diets with supplements reduced disciplinary incidents - such as attacks on fellow inmates and officers, or breaking prison rules - by a third. While prison menus did offer healthy options, the researchers realised that inmates avoided them in favour of a diet of junk food that left them deprived of nutrients.