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This entry is our account of a study selected by Drug and Alcohol Findings as particularly relevant to improving outcomes from drug or alcohol interventions in the UK. Unless indicated otherwise, permission is given to distribute this entry or incorporate passages in other documents as long as the source is acknowledged including the web address <http://findings.org.uk>. The original study was not published by Findings; click on the [Title](#) to obtain copies. Free reprints may also be available from the authors – click [Request reprint](#) to send or adapt the pre-prepared e-mail message. Links to source documents are in [blue](#). Hover mouse over [orange](#) text for explanatory notes. The Summary is intended to convey the findings and views expressed in the study. Below are some comments from Drug and Alcohol Findings.

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► [Long-term effects of prenatal and infancy nurse home visitation on the life course of youths: 19-year follow-up of a randomized trial.](#)



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Eckenrode J., Campa M., Luckey D.W. et al. [Request reprint](#)

Archives of Pediatric and Adolescent Medicine: 2010, 164(1), p. 9–15.

In their prevention themes British drug strategies place considerable weight on early years parenting support; whatever else such efforts may achieve, this seminal US study did not find any long-term effects on substance use.

Summary The issue addressed by this seminal US study was whether different degrees of prenatal and early years support for first-time parents would affect the development of their children in ways including their substance use. This report from the study follows up the children to age 19, offering an unusually long-term perspective.

The featured report derives from the New York state site of the multi-site [Nurse-Family Partnership](#) study. Between 1978 and 1980 researchers based at antenatal services actively recruited young (under 19), poor or unmarried women in their first pregnancy. Though other first-time mothers-to-be were allowed to join the study, 85% of the 400 who did join (500 were invited) were in at least one of these disadvantaged categories.

They were randomly allocated to four different kinds and degrees of support. The two most basic simply offered to screen the child at age one and two for developmental problems and refer them for help if needed with or without free transportation to relevant services. Transportation made no difference to service use, so these groups were combined. Additional to screening and transportation, a third group was regularly visited at home by a nurse during pregnancy, on average nine times. A fourth group were assigned to the full intervention which additionally entailed post-birth nurse home visits (on average 23 times) up to the child's second birthday. Nurses aimed to improve pregnancy outcomes and children's health and development by helping parents improve their own health and provide more competent care, and to help families become economically self-sufficient through family planning, completing education, and finding work. To achieve these goals, nurses linked families with needed services and tried to

involve fathers, family members, and friends in the pregnancy, birth, and early care of the child.

Main findings


At 19 years of age, 310 of the children – nearly 9 in 10 of those still alive, not adopted, and not mentally disabled – completed a telephone interview which assessed their history of arrests and convictions, delinquent and criminal behaviour, educational achievement, pregnancies and births, use of welfare, and use of substances – specifically whether in the past six months they had used illegal drugs or 'binge' drank over four drinks (over 56g alcohol or seven UK units) at one sitting. Of the 17 variables assessed, the only statistically significant differences were fewer lifetime arrests and convictions among children whose mothers had been visited both during pregnancy and infancy than those not visited by the nurse but only screened for developmental problems.

These differences were due to the intervention's substantial impact on the female children; among the boys there were essentially no differences. Supplementing these analyses, it was shown that the intervention had delayed the age at which girls had been (if at all) first arrested. In particular, the full intervention suppressed the incidence of arrests for serious and violent crime by the girls and its impact on their arrests was concentrated in the mid-teen years. There were also some indications of greater sexual restraint and responsibility among full intervention children.

In respect of substance use, after adjusting for other influences, as defined by the study 52% of the screening-only children had recently used illegal drugs and 32% had 'binge' drank, figures only marginally and non-significantly reduced to 49% and 28% respectively among children whose mothers had been visited on average 31 times both during pregnancy and infancy.

The authors' conclusions

The program produced enduring effects on girls' involvement with the criminal justice system but, except for sex-related risks among youths born to high-risk women, there were no other effects on the children's life course.

 The [English national drug strategy](#) sees early years support for disadvantaged or vulnerable families as an important way to reduce risks of a variety of problems including substance use. Initiatives include preschool education and a programme similar to that tested in the featured study – 'Family Nurse Partnerships' to develop the parental capacity of mothers and fathers through intensive and structured support from early pregnancy until the child is two years old. The [Scottish drug strategy](#) also focuses on the development of an "early years framework" to build parenting and family capacity to raise children less vulnerable to substance use problems among others. By 2011 this approach had been incorporated in government-initiated [proposed legislation](#) scheduled to be implemented in 2013.

Whatever their other positive effects, the evidence that such programmes can affect later substance use is thin and made thinner yet by the featured report. Reviewers (1 2 3) have identified the Nurse-Family Partnership study as one of just two pre-school parenting programmes to have been shown to affect later substance use (details below).

This lack of evidence could be because the outcomes assessed did not necessarily reflect damaging forms of drug use which would be expected to be affected by a programme to prevent dysfunctional development. In the featured study, over the past six months getting drunk or trying cannabis once would have been enough to classify the young adult as a binge drinker or illegal drug user, neither very unusual (as indicated by the high proportions who met these criteria) or in themselves indicative of a suboptimal upbringing.

These studies did not target substance using parents. Similar programmes which did target these parents have [not been shown](#) to improve child development.

The positive results from the featured study [emerged](#) when the children were aged 15 and only among 'high risk' families who were poor and/or where the mother was not married and who had been visited up to the child's second birthday (children visited only during pregnancy were actually more likely to smoke, drink, use drugs and to exhibit parent-observed substance-related problems). Compared to screening-only families, children visited by nurses up to age two were less delinquent and anti-social including drinking less often (once versus two to three times) in the past six months. There were also indications short of conventional levels of statistical significance that they smoked fewer cigarettes and that their parents had noticed them engaging in fewer problem behaviours related to drinking or drug use. In the featured report, around age 15 was when impacts on the delinquency of the girls were at their height. It seems that whatever the effects on drinking and other substance use at these ages, these did not persist to age 19, at least not in the form of a lower incidence of heavy single occasion drinking or experience of illegal drugs.

The other such programme shown to have affected substance use was evaluated by the US [High/Scope Perry study \(1 2 3\)](#). It recruited a small sample of poor black families and randomly assigned about half to a preschool programme for children aged three and four. However, the intervention went well beyond the home visits of the featured study. Delivered by qualified teachers with caseloads not exceeding eight children, it involved daily pre-school classes lasting at least two and half hours each weekday featuring a participatory education approach intended to support children's self-initiated learning, and the teachers visited the families at home every week or every two weeks to forge an educationally-oriented partnership with the parents. Though the (former) children were tracked up to age 40, beneficial effects on substance-related crime were focused in the young adult years in the form of a much smaller proportion arrested for drug crimes than children in families not offered a preschool programme.

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