The Cambridge-Somerville Youth Study (CSYS) was the first large-scale well-designed delinquency prevention experiment. Boys were matched on delinquency prediction scores and randomly allocated either to receive a treatment program from 1939 onward or to be in a control group who received no treatment. The treatment program was very intensive, offering regular friendly help from counselors in visits every 2 weeks on average, and it lasted over 5 years on average (from when the boys were approximately ages 10-15 years). However, the treatment program proved to be at best ineffective and at worst damaging. In a follow-up when the participants were approximately aged 45 years, McCord concluded that the program had undesirable effects on criminal behavior, health, and employment. This conclusion, and this experiment, had a major impact on criminology in showing that well-intentioned attempts to help children could backfire.

The article by Welsh and colleagues is a highly commendable effort to follow 253 pairs of CSYS participants (those who were still in the program in 1942) in death records up to approximately 89 years after they were born, to investigate the association of the program with mortality. To the extent that the program had undesirable effects on criminal behavior and health, the authors predicted that it would have an undesirable association with mortality. However, they found no significant associations of the program with their various measures of mortality.

A great deal of research shows that convicted offenders tend to die earlier than nonoffenders. Welsh and colleagues reviewed several studies of this and have recently found in the CSYS that life course–persistent offenders tended to die 7 to 8 years earlier than either adolescence-limited offenders or nonoffenders. Interestingly, the group differences in the risk of death were not apparent in their research until after age 50 years. In more recent cohorts, and especially in more diverse samples of inner-city males, homicide is an important cause of death, especially at younger ages. In the Pittsburgh Youth Study, which is a prospective longitudinal study of 1517 inner-city males from age 7 to 13 years onward, 61 died up to age 29 years, and in the majority of cases (39) the cause of death was homicide. Nearly half (44%) of those who died by homicide were convicted of crimes up to age 14 years, compared with 17% of the remainder.

Why were there no significant differences in long-term mortality in the CSYS? One possible reason is because the effects of the program on criminal behavior were not that large. According to McCord, she investigated 15 treatment-control comparisons on different measures of criminal behavior up to age 45 years on average, and in only 1 case was there a significant difference: 78% of treated males were convicted at least twice, compared with 67% of control males. This does not indicate a very strong effect of the program on criminal behavior, especially in light of the 14 nonsignificant tests.

McCord also investigated the effects of the program on health issues, and here she found 4 significant results among 15 comparisons, all favoring the control group. In particular, while equal numbers of males from the treated and control groups (24) had died, males from the treated group had died significantly earlier (at age 32 years on average, compared with age 38 years for the control males). However, in the lifetime follow-up, Welsh and colleagues did not find that the treated males tended to die significantly earlier.

It is very important to follow up prevention experiments to investigate long-term outcomes, for a number of reasons. In particular, long-term effects may be different from short-term effects, as...
indeed Welsh and colleagues\(^2\) have demonstrated. Initial effects may wear off or decay or may become greater over time, or there may be “sleeper” effects that only appear several years after the intervention. Also, different outcome measures may become more salient as the follow-up period is extended and the participants become older. All of these issues were discussed by Farrington and Welsh\(^5\) in their review of criminological experiments with follow-up periods of at least 10 years. Shockingly, they could find only 12 experiments of this nature with at least 100 participants originally and with outcome measures of offending. Clearly, more such experiments are greatly needed.

It would be interesting to study the effects of delinquency prevention programs on the children of the original participants. One of the 12 studies with long-term follow-ups was the Seattle Social Development Project.\(^6\) That quasi-experimental trial followed up all consenting fifth-grade students ($N = 808$) from 18 Seattle public elementary schools from age 10 years (in 1985) to age 39 years (in 2014), with 88% retention. The full intervention from grades 1 through 6 consisted of teacher in-service training, skills training for children, and parent workshops. Intervention outcomes across 9 constructs assessed from ages 30 to 39 years in 3 domains of health behavior, positive functioning, and adult health and success were examined. An omnibus test found a significant desirable overall intervention-control difference. The intervention was associated with better health maintenance behavior, mental health, and overall adult health and success. The study also examined the 383 first-born offspring aged 1 to 22 years across 7 annual waves. Among the offspring of intervention parents, favorable associations of the intervention were observed with 4 domains: improved child developmental functioning (ages 1-5 years), lower teacher-rated behavior problems (ages 6-18 years), higher teacher-rated academic skills and performance (ages 6-18 years), and lower child self-reported risk behaviors (ages 6-18 years).\(^7\) These findings underscore the importance of long-term follow-ups of both participants and their offspring from intervention studies.

Despite the massive investment of time and resources, and the best intentions, the CSYS was not successful in reducing offending. Why not? Many possible reasons have been proposed. McCord\(^1\) speculated that the treatment program may have generated high expectations, which may have led to feelings of deprivation when it was terminated. She also thought that putting antisocial boys together in a summer camp may have had undesirable contagion effects. However, interestingly, most of the treated participants thought that the program had been helpful to them, for example, in providing guidance or teaching them to get along with others. There are many examples in the criminological literature of differences between the opinions of program participants and the true effects of programs. For example, in a comparison of 2 boot camp-style programs for young offenders,\(^8\) one (run by prison staff) was hated by the boys but reduced recidivism (possibly because it included cognitive-behavioral programs as well as military drilling), whereas the other (run by army staff) was loved by the boys but had no effect on recidivism. The implication is that plausible and well-intentioned programs are not likely to be as effective as programs based on solid empirical evidence.

In conclusion, it is extremely important to follow up delinquency prevention programs to assess their long-term effects. We hope very much that Welsh and colleagues\(^2\) will be able to follow up the participants throughout their lives in criminal records, to shed more light on the effects of the program on offending, and perhaps they could also interview the children of the participants to investigate any possible trickle-down effects of the program on them.

ARTICLE INFORMATION
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The Need for Long-term Follow-ups of Delinquency Prevention Experiments

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Conflict of Interest Disclosures: None reported.

REFERENCES


