

The Preventive Effects of Early Intervention on the Attendance and Grades of Urban Adolescents

Community mental health theory recommends prevention instead of rehabilitation. There are few data, however, that show that prevention is possible. This study addresses that issue. Forty urban adolescents with school adjustment problems were randomly assigned to either an early intervention or a control group. The program was conducted for 2 years. The program was found to prevent deterioration in attendance and grades. That is, while the attendance and grades of the control students deteriorated significantly, the attendance and grades of the program students remained the same. This preventive effect did not occur until the students had been in the program for 2 years.

There is consensus in community mental health theory that prevention is preferable to rehabilitation (Allen, Chinsky, Larcen, Lochman, & Selinger, 1976; Bloom, 1977; Bower, 1972; Caplan, 1970; Cowen et al., 1975; Zax & Specter, 1974). There are even economic arguments that support this stance (Harper & Balch, 1975). The data supporting this idea, however, are "scanty and disappointing" (Perlman, 1975, p. 617).

There are several reasons for this paucity. Prevention programs are difficult to establish. Major institutional changes must be made, and certain rights to privacy and freedom of choice must be compromised (Kessler & Albee, 1975). Funding is also a difficulty, for there is no constituency with a "felt need" for prevention (Broskowski & Baker, 1974).

The effects of prevention programs are difficult to document. A major problem is goal definition. The prevention of "'mental illness,' with no further qualification is . . . pretty hard to get a hold of" (Dohrenwend, 1976, p. 1). Zigler and Trickett (1978) cite several programs that could not be evaluated because their goals were unclear.

Even if clear goals do exist, it is difficult to measure their attainment. The goals are usually to prevent some events that are expected to occur outside of the program. There may be no *one* objective criterion that correlates well with those events. Furthermore, the events may not be expected to occur until some future time. Consequently, data about prevention programs must be collected over a long period of time by using multiple variables and by using objective measures outside the program (Kelly, Snowden, & Muñoz, 1977).

The greatest difficulty in documenting prevention, however, is measuring the nonoccurrence of an event. That is, prevention is successful if a specified event does *not* occur. The only way to know whether an event has not occurred is to know whether it would have occurred in the absence of a program. Campbell and Stanley (1963) have argued that the only way to know what would have happened if there had been no program is to have a randomly assigned control group. Thus, the difficulty

in convincing decision makers that a control group is necessary may be the greatest barrier to documenting prevention (Broskowski & Baker, 1974).

The few rigorous studies that have been done have produced mixed results. Jackson, Cleveland, and Merenda (1975) tried to prevent school failure by offering group therapy to randomly assigned groups of high-risk fifth and sixth graders. Their short-term results were negative, but a 10-year follow-up showed that more of their experimental than their control group had stayed in college. On the other hand, Baer, Jacobs, and Carr (Note 1) found that participation in an Outward Bound program prevented juvenile arrests on a short-term basis, but a 5-year follow-up showed no significant effects.

The most difficult results for community mental health theory to explain have been reported by McCord (1978). She found that the Cambridge-Somerville Youth Project of the 1940s significantly harmed the individuals it was designed to help. A 30-year follow-up showed that, as compared with the control group, the experimental group had significantly more signs of alcoholism, job dissatisfaction, serious mental illness, stress-related physical illness, earlier death, lower job status, and more commitments of a second crime after a first one. Thus, it is not yet clear whether prevention is possible.

This study was designed to address that question of prevention. The authors attempted to document the effects of an early intervention program in an urban school setting over a 2-year period. The immediate goal of the program was to prevent an increase in school failure experiences among high-risk adolescents. The variables that were chosen to reflect that goal were attendance, promptness, discipline referrals, and grades. The use of a randomly assigned control group was sanctioned by both the funding agency and the school system.

Method

STUDENT SELECTION

Forty seventh graders were selected from a class of 555 students in a large, urban, racially mixed junior high school. Selection was made on the basis of consultation with school personnel (teachers, nurse, school psychologist, guidance counselors, vice-principal, and principal) and examination of the guidance folders of every seventh

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Table 1: Demographic Characteristics of Selected Students

Sex and race				Age (in years) ^a			
Black male	Black female	White male	White female	12	13	14	15
17	10	7	6	1	22	14	3
Socioeconomic class ^b				Academic track ^c			
Upper middle	Lower middle	Upper lower	Lower lower	High	Above average	Average	Below average
1	10	21	8	3	7	11	19

^a First day of seventh grade. ^b According to Warner and Lunt's (1941) method. ^c Judged academic potential.

grader. A pool was obtained of students who each met at least two of the three following criteria: (a) low academic motivation, (b) family problems, and (c) frequent or serious discipline referrals. These students were judged to be "at risk" for increasing school failure experiences. A breakdown of the student pool by sex, race, age, social class, and academic track is shown in Table 1. Warner and Lunt's (1941) method for determining social class was used. The school placed students in academic tracks according to their judged academic potential. The selected students had been absent from school for an average of 22 days during sixth grade and had a D+ grade point average.

STUDENT ASSIGNMENT

Random assignment of the 40 students to either the early intervention program or the control group was made through the use of a yoked-control design. Twenty pairs of students were selected by matching the students on variables that were thought to be most related to school failure experiences. In descending order of their consideration, these variables were classroom assignment, teachers, academic track, sixth-grade attendance, and sixth-grade grades. Then one member of each matched pair was randomly assigned to the early intervention program; the other member was assigned to the control group.

Statistical analyses of the students' sixth-grade grades and attendance showed no significant differences between the program and control groups prior to the start of the treatment. The school staff was informed which students had been selected for the early intervention program. Although school personnel were aware of the existence and purpose of a control group, at no time were the names of students in the control group identified to them. Thus, members of the control group received no special program, although the resources ordinarily available within the school system—tutoring, remedial classes, evaluation and referral for learning disability or emotional disorder—were available to them.

THE PROGRAM

Rose (1972) has developed a method that enables students who are "at risk" for school

failure to avoid that failure. He solicits cooperation from teachers and parents and sees the students in behaviorally oriented small group meetings. Bien (1975) has provided experimental data that support Rose's use of both the teachers and the parents in the intervention. Thus the early intervention program that was used in this study had the following components.

Collecting Up-to-Date Information About Each Student's Actions

Daily attendance, tardiness, and disciplinary actions were recorded for each program student on a form resembling an attendance register. In addition, a different one of each of the program students' teachers was administered a short, standard interview each week about what the students were doing in class. The interview contained five questions to which the teacher answered yes or no, for example, "Does Mary bring a pen, paper, and her book to class?" The interview schedule allowed each teacher of each student to be seen about once a month. If more information was needed, a teacher was seen more often, the disciplinary principal was consulted, and/or the student was observed in class.

Providing Systematic Feedback to the Student and/or the Parents About the Student's Actions

Every mark on the attendance registerlike form was followed up in some way. The student might have been seen in the hall for a few seconds or telephoned at home. After a face-to-face, "get acquainted" session with the parent, the parent might have been telephoned, or written a short note, or visited briefly (if there was no telephone). Also, as soon as the number of marks in a particular category, such as tardiness, started to decrease, a positive letter was sent home and the student was praised.

Attaching Value to the Student's Actions

The program students received a point for every day that they came to school, that they arrived on time, and that they received no disciplinary action. They also received a point for each "yes" a teacher gave them during the teacher interviews. These points were given out during weekly small group meetings (five to seven students) and were recorded and tallied by the students. At the end of the meetings, students also were given points for obeying the four meeting rules, such as "Don't talk while another is talking." Earning a certain number of points allowed a student to take an extra school trip each semester. The students helped choose the destination for the trip, and the trip was highly valued.

Helping the Student Earn More Points

After the points were tallied, the group leader directed a discussion about how each student could earn more points. School rules and procedures were reviewed. Behavior that teachers approve of was discussed and role played. And if a student still was not handing in schoolwork after the student had been reminded about it and the parents had been informed, weekly individual schoolwork monitoring sessions were scheduled

between the student and a paraprofessional.

The program was provided to the selected students for 2 school years. A detailed account of the program procedures is available in the program manual (Stanley, Goldstein, & Bry, Note 2).

OUTCOME MEASURES

Absences

The total number of days that each student was absent from school was recorded from the sixth-grade report cards to yield a preprogram measure. Then the total number of days that each student was absent during the seventh grade and the eighth grade (Years 1 and 2 of the program) were recorded from the official attendance registers. The latter two figures were each subtracted from the preprogram figure to obtain change scores for absences from sixth to seventh grades and from sixth to eighth grades.

Tardiness

The total number of days tardy was recorded from the sixth-grade report cards as a preprogram measure. Then the total number of tardinesses during the seventh and eighth grades was recorded from the official registers. Then the latter two figures were each subtracted from the first one to obtain change scores.

Grades

Sixth-grade report cards yielded preprogram final grades in physical education, English, math, science, and social studies. Seventh- and eighth-grade final grades were obtained in the same subjects, and all grades were scaled from 0 (failure) to 4 (outstanding). Grades from all courses were then summed to yield a grade point total. Sixth-grade totals were subtracted from seventh- and eighth-grade totals to yield change scores for the first year and the first 2 years, respectively.

Disciplinary Actions

The number of times that students had been disciplined was not available for sixth grade. The total numbers of times that each student had been disciplined during both the seventh and eighth grades were recorded from central office detention records and vice-principal suspension records. It was then noted that improvement in attendance was often accompanied by more referrals for disciplinary actions; that is, it appeared that as students came to school more often, they got into more conflict with school personnel. Therefore, to obtain a change score from seventh to eighth grade, it was decided to compare the ratios obtained by dividing the number of disciplinary actions taken by the number of days present for each year. The eighth-grade ratio was subtracted from the seventh-grade ratio to obtain a change score for each group. No attempt was made to compare the sixth- and eighth-grade scores because of the unavailability of sixth-grade disciplinary records.

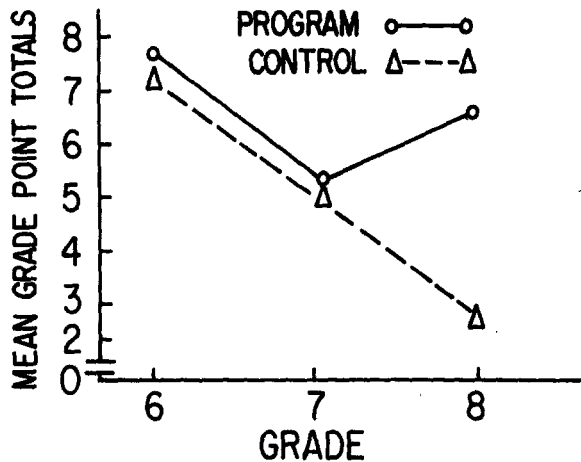


Figure 1. Mean grade point totals of program and control students during sixth, seventh, and eighth grades.

Results

Five program students transferred to other school systems during the second year of the program. Thus Wilcoxon matched-pairs signed-ranks tests were performed on the 2-year change scores of 15 matched pairs. The tests showed significant differences between the changes in the program students' grades and those of the control group ($n = 15, p < .05$). The tests also showed significant differences between the changes in the program students' attendance and those of the control group ($n = 15, p < .02$). No significant differences were shown between the changes in the tardiness and disciplinary actions of the two groups.

Wilcoxon tests were also performed on the changes that occurred in the records of the 15 matched pairs during the first year of the program. No significant differences between the program and control groups were found.

Figures 1 and 2 represent the patterns of changes that occurred in the grades and attendance of the program and control groups over the 2 years of the early intervention program. No program effects were evident by the end of the first year, and both groups were experiencing more school failure. By the end of the second year, however, that trend had reversed for the program group. Whereas the control group's school experiences were continuing to deteriorate, further school failure had been prevented for the program group.

Discussion

Thus, a rigorously designed study has resulted in the documentation of prevention. Increases in urban school failure experiences were prevented among teenagers "at risk" by using a behaviorally oriented program. It was necessary for the program to continue for 2 years. The program required regular contact not only with the students but also with the parents and teachers.

The data that were collected in this study demonstrate how important research design is in documenting prevention. If the study had not run for 2 years, this prevention

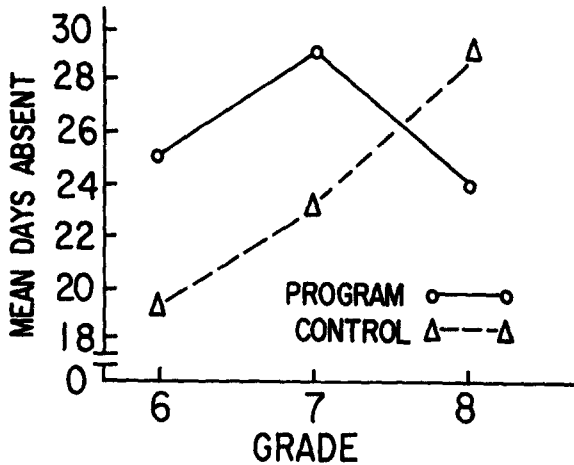


Figure 2. Mean days absent for the program and control students during sixth, seventh, and eighth grades.

would not have been documented. If the data had not been collected over time, the fact that it took 1 year before the prevention became apparent would not have been learned. The use of the multiple objective outcome measures showed that school failure experience is complex; a student's grades and attendance can be affected by a program, yet his or her tardiness and discipline referrals remain unaffected. Finally, these data make it very clear that the documentation of prevention relies heavily upon randomly assigned control groups. Without the control group, there would have been no evidence of prevention at all.

Now that it is known that prevention occurred, other questions arise. For instance, it is interesting that no overall significant differences between the groups occurred until the second year of the program. These results confirm the authors' impression that the program students became more involved in influencing their school records and earning points and praise after they saw that their group leaders were back in school to work with them for a second year. It is assumed that the special attention of a "firm and consistent" adult is a salient feature of this early intervention program. Since students get some attention from new adults each year in school, perhaps the attention does not become *special* until it continues for more than 1 year.

It is also interesting that the program affected the attendance and grades of the program students but not their tardiness and disciplinary referrals. While the program was in progress, a new school policy regarding tardiness and disciplinary referrals was implemented. The policy contained a graduated list of consequences that would be applied automatically as tardiness and disciplinary referrals accumulated during the school year. School policy was probably a stronger influence on the tardiness and referrals of both the program and control groups than the early intervention program was on the program group's, for the school policy was implemented every school day, whereas the program held meetings only once a week.

These short-term outcome data also raise the question of long-term effects. If a prevention program has no more effects than the reduction of school failure for 1 year, it has little long-term social significance. Thus, the results of this study call for

long-term follow-up. The follow-up studies should test whether the early intervention program had an effect on unemployment, school dropout, drug and alcohol use, and juvenile delinquency.

These data also raise the question of differential program effects. Are there some types of students in the population used in this study who are more affected by a behaviorally oriented program than others? Multivariate analyses of these data might shed some light on this question.

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