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Could An Ounce Of Cure Be Worth A Pound Of Prevention?

The "Fade Out" of Literacy in the Perry Preschool Children at Age 19

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In the United States, findings of national adult literacy surveys over the last thirty years have revealed tens of millions of adults whose literacy skills are poorly developed. The minor approach to remedying this problem at the national level has been to provide a small amount of federal money, less than $400,000,000 in 1999, to "cure" the problem through adult literacy education.

But the major strategy has followed the homily that "an ounce of prevention is worth a pound of cure." So we have tried to "prevent" the problem of poor adult literacy over the long run by improving the literacy skills of children in the K-12 school system. This has included the present federal spending of some $7,000,000,000 on Title I compensatory education. But because this has proven a costly and not entirely satisfactorily program, it has been argued that Title I is too late, and that we need to improve children's learning before they get to school. So we presently invest close to $4,000,000,000 in Head Start preschool programs. But since this has been found to not produce the hoped for long term improvements in learning, it has recently been argued that age 3 is too late, we need to start with birth. So now we have committed billions of dollars to Early Head Start for children from birth to age three years. In short, what we have done is to spend "a pound on prevention and an ounce on cure."

But now there is some evidence that our investment strategy in preschool education may not produce the desired results, that is, adults who are "functionally" literate. New analyses of the results from the only study available that measured the functional literacy skills of preschool children and a control group of children who did not receive preschool when they reached young adulthood (age 19) indicates that the two groups were not significantly different with regard to literacy skills - and both groups were "functionally illiterate" by contemporary standards.

The famous High /Scope Perry Preschool study (reported in the Changed Lives book, Berrueta-Clement, et. a., 1984) is frequently cited as having produced young adults who were more literate than the non-preschool control group (Brizius & Foster, 1993, p. 56). However that conclusion is wrong because the functional literacy assessment and the analysis of results was faulty on several counts.

1. A total of eight of the 19 year old young adults refused to take the Adult Performance Level (APL) functional literacy test because "they could not read" (Berrueta-Clement, et. a., 1984, p. 34). Five of these eight were from the preschool group and three from the control group. That is almost nine percent of the preschool group compared to five percent of the control group who said they could not read.

2. The researchers omitted the eight people who said they could not read from the analysis of the literacy skills of preschool and control groups. However, that is an inappropriate procedure. Instead, the eight illiterates should have been given scores of zero and then these scores should have been used to calculate the average scores of the two groups.

   In the "Changed Lives" report, the mean scores for preschool and control groups on the total test of 40 items were given as 61.5 percent and 54.5 percent respectively. However, the new mean scores with the five zero scores added to the preschool group and the three zero scores added to the control group's scores produced scores of 56 percent and 52 percent, respectively, scores that placed both groups almost a standard deviation (SD) below the norming group, at about the 16th percentile. The norming group of the APL test was made-up of students in adult basic education courses, of whom some 78 percent had no high school diploma. The preschool and control groups scored well below this norming group, which, itself, represents a lower level of skills than expected of a more representative sample of adults in the United States.

3. On page 183 of the "Changed Lives" report, a three-way analysis of covariance that adjusted for

differences in preschool and control children's IQ's, their family socioeconomic status, mother's education and mother's employment at study entry is presented. The results indicate no significant difference between preschool and control groups on the APL at age 19, even with the eight illiterates excluded. But in the body of the report the researchers ignored this multivariate analysis and instead relied on simple two-way tests of significance which ignored the fact that 30 percent of control group mothers worked outside the home while only about 9 percent of preschool mothers worked outside the home (Berrueta-Clement, et. al, 1984, p. 8). This means that there could have been many more oral language and emergent literacy interactions among mothers and their children in the preschool group.

4. An additional problem that renders the use of the APL findings inappropriate, is that, instead of young adults taking the tests unaided, as called for in the administration procedures of the APL, in the Perry Preschool study, ".the interviewer read each of the items to the respondent and could repeat them upon request" (Berrueta-Clement, et. al, p. 34). The report goes on to state that, "Reading skills were still required, however, to decode and interpret, the supplementary information needed for some of the items." (Berrueta-Clement, et. al, p.34). However, since the APL was not administered according to the standard conditions under which the test norms were developed, the results cannot meaningfully be interpreted in terms of the norms given for the test.

   All this raises an important policy question, is it possible that starting early childhood education at birth is too late? Suppose that the real head start starts with the heads of the parents and that over the last three decades if we had invested "pounds" in our "cures" by putting billions of dollars into the compensatory education of adolescents and young adults, we might have prevented many unwanted pregnancies, led many mothers-to-be to find and obtain good prenatal care and have fewer and healthier babies, and made it possible to have to prepare many fewer children for school through institutional interventions. Possibly, given the many multiplier effects of investing in the education of adults, a few more "ounces of cure" with adults may have been worth many "pounds of prevention" with children.

References

Berrueta-Clement, et. al (1984). Changed lives: The effects of the Perry Preschool Program on youths through age 19. Ypsilanti, MI: The High/Scope Press. (data for the figure comes from pages 32-36)

Brizius, J. & Foster, S. (1993). Generation to generation. Realizing the promise of family literacy. Ypsilanti, MI: High/Scope Press. (p. 56)