

Compared to their peers who received only the basic musical curriculum, the students in the Minneapolis study who received the enhanced curriculum showed very significantly greater improvements in classroom behaviors on all the measures teachers reported (Figure 6). These measures involve both social and personal development. Furthermore, a specific measure of engagement and behavior during the music activity, the Olson Index, correlates highly significantly with these improvements as well. To what extent might these correlations have long-lasting effect?

Dr. Steven Buka of Harvard School of Public Health and Dr. Lewis Lipsitt of Brown University have been developing a longitudinal database based on a study begun in Providence, RI almost 40 years ago. Data on the subjects now extends from prenatal records to age 35. It includes rich information about social, psychological, and cognitive outcomes that can be compared with testing up to age seven. These data are now being analyzed in detail. Self reports from 522 individuals through a questionnaire reveal their current interest in music, extent, type, and timing of previous music training. This provides an opportunity to test and study many hypotheses that concern the long-term consequences of music training and experience, while adjusting for confounding factors, such as socioeconomic status.

Figures 7a and b show that the probability of having been arrested at least once by age 18 drops with increased interest in music and drops still further as individual or group musical skill levels increase. These data then support the possibility of longer duration effects similar to those detected in shorter scale with the Minneapolis data.

The Brown Longitudinal Study provides a means of testing the idea of mental stretching for evidence of long term cognitive, social, or emotional effects of music training. We have observed evidence of long-term social-emotional effects of interest in music and music training which we continue to analyze.

*(Gardiner and Buka, 2000; Gardiner and Olson, 1999; 2000)*

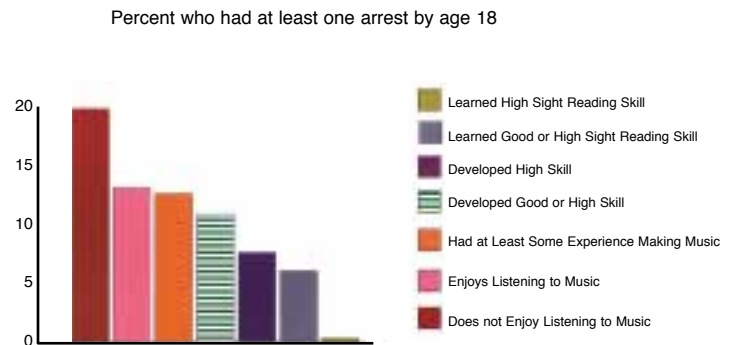


FIGURE VIIa

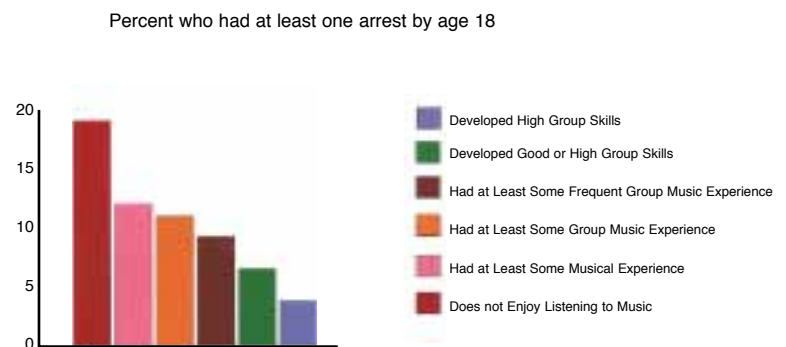


FIGURE VIIb