

Title: The long-term impact of HIV disease severity on cognitive and adaptive functioning during childhood and adolescence

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Background: Some children with HIV have problems learning, solving problems and/or doing everyday activities. These problems can make it harder to have a good quality of life as they get older. This study compared the learning and everyday functioning skills of youth with HIV to youth who were exposed but not infected to HIV. It also examined whether having HIV or an early AIDS diagnosis made a difference in how well youth learned those skills.

Methods: We studied 461 youth who were enrolled in PHACS. They were between 7 and 16 yrs of age and completed a test that measured their thinking and problem solving skills. Their parents or primary caregivers completed a questionnaire about how their youth did in social settings and in activities of daily living (e.g. daily activities such as feeding, bathing, dressing, grooming, school, household chores, and relaxation/fun). The youth were divided into three groups: 153 were exposed to but did not have HIV; 223 youth had HIV but never AIDS; and 75 with HIV who had an AIDS-illness at some point in their lives. We compared their information with their scores on the problem-solving test and on the questions about daily living skills. Our comparisons took into account differences in age, gender, ethnicity, language, income, education and primary caregiver.

Results: The average age of the youth in this study was 11yrs, 6mths; 71% were African-American; 28% Hispanic; 57% lived with their biological parent; 87% of the youth with AIDS got that diagnosis before they reached age 5. The groups did not differ from one another on most of the areas tested, including overall thinking skills, language, memory, visual-perceptual skills, and activities of daily living. The area that did show differences was a test of how quickly youth can work with visual information. The youth who had an AIDS diagnosis completed tasks much more slowly than youth in the other two groups. Lastly, even though the youth with AIDS did about as well as the others in thinking skills, more youth in this group (20%) had scores in the very delayed range compared to the other two groups. The number of youth in that range in the HIV+/no-AIDS group was 8%, and in the HIV- group, 13%.

Conclusions: We looked at the learning of youth who have lived with HIV for a long time. They did as well on problem solving and other learning tasks as youth who were exposed to HIV but not infected. They also did as well in activities of daily living. However, youth who had an AIDS diagnosis early in life may be more likely to have very specific and severe problems as they grow older. Anti-HIV medications may keep a child with HIV from getting AIDS and this could be very important for their well-being later on in life. Also youth who had an AIDS illness should be followed closely in school to make sure they are getting the right help.

Support: This study was supported by NICHD with co-funding from NIDA, NIAID, NIMH, NINDS, NIDCD, NHLBI, and NIAAA.