Long-Term Study of the Thinking, Memory, and Problem Solving Strengths and Weaknesses in Children and Adolescents with FXS

What is the research about?

Few researchers have looked at whether there are positive or negative changes in the impairments of children and youth with FXS, over time. Another question that has remained unanswered is whether these young people also have strengths in some areas, compared to their weaknesses. If they do, the strengths may help overcome the effects of their impairments.

What did the researchers do?

The participants were 114 male and 70 female children and teenagers who ranged in age from 6 to 16 at the beginning of this study. The children and their parents were already taking part in a long-term study of FXS. The participants were given tests that identified their language, decision-making, and memory (e.g., mental arithmetic) skills. They were also tested to see how quickly they could figure out problems, and how well they could concentrate and ignore distractions. The results of these tests were compared to the results usually found in people who don`t have FXS or any other brain disorder.

What did the researchers find?

The researchers found that compared to their visual/spatial skills, the children had greater verbal skills, which became apparent in adolescence. In childhood, they showed weakness in working memory but had greater processing speed, which lessened in adolescence. This study showed that the thinking, memory, and learning (cognitive) profile seen in people with FXS develops and changes from childhood to adolescence.

Take home message

Understanding that children and adolescents with FXS have a specific cognitive profile could result in targeted treatments to help them develop their skills and overcome their weaknesses, resulting in improved daily functioning.

NOTE: The original Research Report was written by E.M. Quintin, and colleagues, and was published in Developmental Psychopathology. 2016.