



6 FACTS ABOUT HOW DISADVANTAGE IMPACTS EDUCATION

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Education reform is a hot topic.

More and more evidence is becoming available that confirms what many people believe: disadvantage at home, in societal and economic terms and even where students live (city vs country, affluent vs impoverished suburb for example) can adversely affect education outcomes.

Here are 6 facts you may not know about disadvantage and its impact on children in our schools:

1. Disadvantaged even before birth

Cognitive capacity is not just a matter of genetics, but can be strongly influenced by external factors like prenatal drug use, environmental toxins, poor nutrition, and exposure to stress and violence. All of these are more prevalent in low-income households, and they affect brain development from before birth through to adulthood.

2. Less verbal exposure

A famous [1995 study by Hart and Risley](#) in the USA demonstrated that by the age of four, children from poor households hear 32 million fewer spoken words than their better-off peers.

[More recent research](#) has shown that *quality* of conversation differs as well. Parents with higher education and income are more likely to engage children with questions and dialogue that invite creative responses. But parents living in disadvantaged circumstances often lack the time and energy for anything more than simple and goal-oriented commands.

3. Poor sense of personal control

Children growing up in disadvantage often experience life as a series of volatile situations over which neither they nor their caregivers have any control. They don't develop a conception of themselves as free individuals capable of making choices and acting on them to shape their lives. Instead they learn to react to crises that are then magnified by their poor ability to plan ahead or reflect.

This doesn't just affect educational success – studies have shown that a low sense of control over one's life has major health impacts in all areas, regardless of finances or access to healthcare.

4. Low executive function

Executive function skills such as impulse control, emotional regulation, attention management, prioritisation of tasks, and working memory draw on a limited supply of mental energy. But the day-to-day insecurities of life in disadvantage interfere with these functions by releasing stress hormones that direct energy away from them towards more basic survival mechanisms.

Regular exposure to these stresses in childhood can inhibit early development of the neural connections that enable executive function, leaving children with both academic and behavioural problems.

5. More demanding employment environment

In today's knowledge-based economy, moving out of disadvantage is becoming more difficult for people with limited education. Achieving employment that provides the potential for economic independence requires more education, planning, and interpersonal skills. And these are the skills people from disadvantaged backgrounds often lack.

6. Intervening with neurodevelopmental exercises

Research has shown that neural interventions can build up a disadvantaged child's learning capacity. Brain training exercises can be a helpful element in overcoming educational deficits for disadvantaged students.

While inhibited neural development in early childhood can have a negative cumulative effect in later stages of life, this can be reversed by training of thinking skills such as memory, attention, processing, and sequencing abilities. In addition, intensive computer delivered language and reading interventions can quickly help compensate for reduced exposure to verbal language and print at home.

And though some critical windows for intervention occur in childhood, the brain continues to develop long after, with many adults showing significant improvement in executive function after completing brief regimens of logic games and reading exercises.