



Innovating to End Urban Poverty

USING EXECUTIVE FUNCTION AND RELATED PRINCIPLES TO IMPROVE THE DESIGN AND DELIVERY OF ASSISTANCE PROGRAMS FOR DISADVANTAGED FAMILIES

LaDonna Pavetti, Ph.D., Vice President, Family Income Support Center on Budget and Policy Priorities, Washington, D.C.

As the millennium began, a report produced by the National Academy of Science set the course for consideration of how brain science can be used to develop programs helping disadvantaged children. Since then, brain-development research has brought into clearer focus the role environment plays in the cognitive function of adults, specifically the executive function skills critical for success in school performance, parenting, and work.

Adults with executive function deficits often have trouble with such tasks as meeting deadlines, arriving on time, and prioritizing and following through on assignments. The negative consequences of such deficiencies magnify for disadvantaged adults, whose financial and social resources are already thin, possibly preventing them—and by extension their children—from emerging from poverty.

THE RELATIONSHIP BETWEEN POVERTY AND EXECUTIVE FUNCTION

Executive function skills are controlled by the prefrontal cortex of the brain, which does not fully mature until the mid-20s. During its long period of development, this part of the brain is

especially susceptible to negative environmental influences, such as high levels of violence and the multiple stresses associated with living in poverty.

Those negative influences throughout childhood and young adulthood represent one of the two pathways through which executive function skills can be compromised in disadvantaged adults. Evidence suggests that disadvantaged children have poorer executive function skills than more advantaged children and that these deficits carry over into adulthood.

In addition, adults living in poverty expend such

The Innovating to End Urban Poverty policy brief series details policy recommendations from top researchers and practitioners on how to improve the quality of life for low-income urban residents. Topics include education, housing, health care, executive function, immigration and the role of place.

significant cognitive resources every day on making ends meet that they have little capacity remaining to set long-term goals. This daily stress on cognitive resources can be thought of as a “bandwidth tax.” Researchers say the poor are less successful than the non-poor in various aspects of life because of this bandwidth tax, not because they are inherently less capable.

In both cases—impairment that has its roots in childhood, and cognitive function that is overly taxed on a daily basis—improvement is possible. Research shows that executive function skills can be built even after the prefrontal cortex is fully developed. Evidence also shows that cognitive bandwidth need not be permanently compromised by poverty. When income rises, so does cognitive capacity.

DEVELOPING EXECUTIVE-FUNCTION INFORMED HUMAN SERVICE PROGRAMS

Strategies to produce better long-term outcomes for disadvantaged adults and their children must take into account how both early and current influences can impair cognitive capacity. Three examples follow of how to address executive function skills deficits and reduced cognitive capacity:

- **Redesign Human Service Programs Using Executive Function Principles.** Considerable evidence shows that executive function skills can be improved in children and adults. Thus, it might be possible to redesign workforce, parenting, and other social service programs targeted to adults to improve executive function skills or, at least, take into account their skills deficits. Three programs suggest potential for improving return on investment for social service, mental health, and employment programs include:
 - **Building Nebraska Families.** This program, which worked with TANF recipients in their homes in rural Nebraska, focused on improving employment for adults and achieved great success by helping them identify and reach individual goals in a variety of domains, such as time management, parenting, financial management, and anger and conflict management. Unfortunately, the program was discontinued because of a change in TANF rules, but its lessons are not lost.
 - **Mobility Mentoring.** Created by the Crittenton Women’s Union (CWU) in Boston, this program uses executive function and related principles to dramatically change how it delivers employment and related services to disadvantaged families.
 - **The New Haven MOMS Partnership.** This program in New Haven, Connecticut, focuses on combating depression, reducing stress, and building foundational skills. Designed around executive function and related principles, its key components include an eight-week cognitive behavioral therapy intervention that has achieved an adherence rate to mental health protocols of between 96 percent and 97 percent vs. the average 35 percent.
 - **Increase family income.** In the short term, additional income should reduce the bandwidth tax that poverty imposes on individuals. In the long term, additional income should help parents create the kind of environment that supports the development of stronger executive function skills in children. Two methods of increasing income are gaining traction. One is to provide subsidized jobs, and the other is to increase the minimum wage.

Although new federal policies in these areas are unlikely in the near term, potential exists for improvement in the private sector and at the state level. In fact, several states have increased their minimum wage. The Gap is an example of a private firm raising its minimum wage to \$9 an hour in 2014 and \$10 an hour in 2015. On the subsidized jobs front, three states—Nebraska, Minnesota, and California—are creating new programs or expanding existing ones targeted to Temporary Assistance for Needy Family (TANF) recipients.

- Reduce the burdens associated with applying for public benefits. Simply applying for public benefits can be an onerous process, which zaps precious cognitive resources that disadvantaged adults could otherwise devote to longer-term planning. Streamlining and simplifying these processes can reduce stress by creating an easier pathway to benefits such as food, housing, and childcare assistance.

Technology improvements and changes in federal law have started to play a role in achieving this goal by allowing states to import information from one agency to another, thereby saving agencies and families time and money.

CONCLUSION

In the current political and fiscal environment, little chance remains for significant new investments in antipoverty programs. Therefore it is important that we seek innovative ways to improve the return on investments we have already made. What we have learned from brain science provides a starting point for considering new ways of designing and delivering services.

[Click here to access all policy briefs in the Innovating to End Urban Poverty Series](#)

USC Price

Sol Price School of Public Policy
*Judith and John Bedrosian Center on
Governance and the Public Enterprise*

USC Price

Sol Price School of Public Policy
Sol Price Center for Social Innovation