



From Neuroscience to the Classroom

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Where We Are and Where We Should Go in the Study of Childhood Poverty and Cognitive Development

Abstract:

Several studies in the realm of developmental science have identified associations between childhood poverty and cognitive development, all of which are related to a complex constellation of individual and social determinants at different levels of analysis (i.e., individual, family and social contexts). The evidence suggest that the impact of those biological, psychosocial, and sociocultural factors on cognitive development could vary according to the type, number and accumulation of risks related to poverty, the time in which these factors exert their influences, the co-occurrence of deprivations and the individual susceptibility to them. Complementarily, during the last decades several experimental and quasi-experimental interventions aimed at optimizing cognitive performance of children living in poverty have been designed, implemented and evaluated in different low- and middle-income countries. Results suggest that it is possible to optimize different aspects of cognitive performance, and that would be possible to transfer some aspects of these gains to other domains including the academic achievement. The variability in the effectiveness of some of these controlled interventions has been related to different aspects of program design (e.g., comprehensiveness, quality, intensity and directionality of interventions, and teachers and family involvement), and to a complex patterns of individual and environmental factors that modulate their implementation. Future directions in this field of research require iterative processes of experimentation based on a continuous dialogue between different disciplines in order to achieve a strategic integration of multiple sources of knowledge to feed the innovation in the design of experimental interventions and their eventual scaling at a community level.

About:

Sebastián J. Lipina, PhD (Buenos Aires, Argentina). Director of the Unit of Applied Neurobiology (UNA, CEMIC-CONICET), Professor of Social Vulnerability and Cognitive Development at the National University of San Martín (UNSAM), and Researcher of the National Council of Scientific and Technological Research (CONICET). Sebastian is a developmental psychologist working in the field of environmental impacts on cognitive and emotional development at different levels of analysis. The current research projects under his direction focuses on the analysis of poverty influences on cognitive development and the design of interventions aimed at optimizing children's cognitive performance through exercising and training in laboratory, school and community settings. As part of his work in the area of poverty and child development, he works as consultant for PAHO, UNDP, UNICEF and several Ministries of Health, Education and Social Development in different Latin American countries. He is member of his institutional IRB (CEMIC), the Committee of Interdisciplinary Studies of the SRCD and Volunteer Researcher of the American Association for the Advancement in Science (AAAS).