

**PREVENTATIVE INTERVENTIONS: AN OVERVIEW
and CRITICAL QUESTIONS**

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THE NATURE OF THE CHALLENGE

ILLUSTRATIVE FINDINGS

1. Over 20% of children in the U.S. live in poverty. Moreover, the gap between the richest and poorest children has widened over the last 25 years (Raver, 2012; Reardon, 2011). The achievement gap between rich and poor students born in 2001 was 30% to 40% larger than those born 25 years earlier (Raver, 2012; Reardon, 2011).
2. The U.S. has the highest level of child poverty in the developed world.
3. The sequelae of poverty include residential instability, homelessness, crowding, family disruptions and unemployment of parents, often single parenthood, neglect and victimization experiences, lack of safety and basic resources, malnutrition and the like. Such stressful events may be compounded by exposure to natural disasters and human-designed traumatic events (shootings, terrorist attacks, refugee status).
4. Poverty is associated with a range of negative outcomes in terms of physical, mental and emotional health. Poverty contributes to developmental delays and deficits in the cognitive (attention, working memory) emotional self-regulation, interpersonal and academic domains such as school readiness and reading vocabulary and comprehension skills. (Yoshikawa et al. 2012). Only 8% of children, from lower SES complete college, as compared to 31% for other SES groups (Blair, 2002; Blair & Raver, 2012).
5. There is evidence for the cumulative impact of a variety of risk factors such as exposure to poverty, victimization experiences of abuse and neglect, harsh and inadequate parenting including mental illness and substance abuse in one's parents, on long-term development. (Tough, 2012). The results of the Adverse Childhood Experiences Study (see www.acestudy.org) indicate that compared to children who had no ACE events, children with 4 or more adverse events evidenced:
 - 51% learning and behavior problems, as compared to 3% problems;
 - 7 x more likely to have had sex before age 15;
 - 30 x more likely to attempt suicide;
 - 46 x more likely to use drugs.
6. Such exposure to cumulative, cascading stressors can have neurophysiological consequences. Such adverse events can impact stress hormones that modulate neural activities in the brain and can impact the long-term synaptic potentiation in corticolimbic circuitry (HPA Axis) associated with the prefrontal cortex (PFC), as well as cortical hemisphere differences (left side of the brain is less active than the right side of the brain) (Blair & Raver, 2012; Raver, 2012). Keep in mind that 90% of brain growth occurs by age 5.

7. As a consequence, such “high-risk” students evidence a variety of deficits by the time they enter school in self-regulatory, metacognitive domains including impulsivity, reduced delay of gratification, reduced working memory and concentration skills, attachment difficulties and often an inability to sit still, follow directions and school routines.
8. Thirty percent of children start formal school way behind and most fall further behind. For example, by 3rd grade 44% of students cannot read at mandatory proficient levels. Reading competence is a “gateway” skill to academic success and high school graduation (Meichenbaum & Biemiller, 1998).

These findings raise a number of “critical questions” for anyone who wants to help close the gap between rich and poor children.

CRITICAL QUESTIONS

1. Can children overcome such adversities? What are “effective” interventions that can help prevent poor outcomes?
2. Can we reduce risk factors and bolster protective factors and increase the level of resilience?
3. Should the intervention goal be to prevent the onset of behavioral and academic problems or treat already existing problems?
4. Which intervention should be implemented with which target population, for which behaviors, at what level, by whom, over what period of time, and how should the program be evaluated?
5. How should a school administrator (superintendent, principal) choose the best level of intervention (Universal-school-wide primary prevention; Selected-secondary intervention with targeted students; Indicated or tertiary intervention that warrants comprehensive wrap-around services)?
6. How can schools incorporate school mental health programs and just how effective are these interventions for each target group of students?
7. What are the dangers of early identification and interventions, as in the case of early stigmatization? The issues of False Positives and False Negatives and developmental changes need to be addressed. For instance, the 50% rule with regard to disruptive school behavior- - 50% of children evidence improvement developmentally.
8. How can such interventions be implemented in a developmentally and culturally-sensitive fashion? Should interventions be conducted on an individual or group basis?
9. How can any early benefits of such interventions be sustained and extended?
10. When evidence-based intervention programs are implemented, what procedures will be included to increase the likelihood of generalization and maintenance? How can the interventionists engage significant others like fellow students, teachers, bus drivers, other school personnel, parents and community members?

11. Can computer technology and multimedia procedures be used to augment the intervention?
12. Can such interventions be built into the overall curriculum and how can the intervention focus on changing the school culture and social norms? Can one implement a “Bottom Up” (use of so-called KERNELS), as compared to a “Top Down” intervention approach?
13. How can the School Principal be challenged to demonstrate sustained leadership in bringing about changes?
14. How can “gatekeepers” (teachers, bus drivers, school counselors, resource police officers) be trained to identify target behaviors like bullying and intervene immediately and effectively? How can “bystander” intervention programs be strengthened?
15. What are the financial benefits of implementing preventative interventions? It has been estimated that for every dollar spent on prevention, this will yield a return of \$7 to \$31 in savings across a lifespan. Some examples:
 - a. For every dollar spent on early childhood interventions (Visiting Nurse Program, High Scope Perry Point Preschool Program, Headstart), the rate of return was as high as \$25,000 over the life-span.
 - b. Consider that high school graduates earn an average of \$290,000 more during their lifespan than high school dropouts and graduates pay \$100,000 more in taxes. It has been estimated that governments lose \$3 billion dollars in potential tax revenue for each one year cohort of high school dropouts (Belfield & Levin, 2007, The price we pay).
 - c. Visit www.paxis.org to see savings on financial benefits of implementing parenting programs estimated to be \$23 million to \$43 million annually.

There are clear benefits to preventative interventions. The answers to these critical questions will determine the effectiveness of the preventative interventions.