

POVERTY & STRESS

B S J

By Neel Jani



The poorest children are 10 times more likely to die. Physically, those in poverty experience greater environmental toxins, air pollution, and hazardous waste. Cognitively underprivileged children face significantly higher levels of turmoil, violence, and strife at home. Overall, children in impoverished households experience much more chaos than do middle and upper-income children growing up, and such instability impairs their cognitive development in the future.

Evans found that children who live in prolonged stressful environments endure higher blood pressure (approximately 2 mm/Hg) when exposed to math problems relative to their counterparts who live in non-stressful environments. Moreover, these children took a longer time for their blood pressure to reach the baseline levels after the problem was handed out.

Hence, research concluded that this was one of the reasons as to why the underprivileged in general perform worse on cognitive tests than those who do not face the adverse conditions of poverty. Interestingly enough, Evans and colleagues found that those who are poor but somehow evade the stress of poverty perform just as well as their non-poor counterparts (Evans, Brooks-Gunn, & Klebanov, 2007). This finding is vital in understanding the relationship between poverty and stress. Poverty in of itself does not lead to poor cognitive ability but rather causes the stressful reaction that accompanies it.

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Research indicates that more detrimental psychological problems were experienced by those exposed to poverty related stress (Bauer and Boyce, 2004). Specifically, they found that stressful environment conditions alter neuroendocrine response systems, primarily the sympathetic-adrenomedullary and hypothalamic-pituitary-adrenal systems. Significantly increasing activity within these response systems leads “to a host of biomedical

diseases and psychiatric disorders responsible for significant population morbidity” (Bauer and Boyce, 2004). Hence, the increased activity of these systems is inevitable for the poor, whose daily life is inherently connected to stressful environments. Unfortunately such high levels of activity within these systems are associated with the degradation of later health. Such health consequences are in fact more devastating toward children. This finding reveals that the poverty cycle is in a sense a feedback loop, since the more poor one gets the less healthy he and his children are; the less healthy his children are the greater the chance that they will also grow up in poverty. The researchers attribute this finding to two reasons. First, children feel helpless in their adverse conditions and bear more stress than the parents; they perceive themselves as lacking control over the negative outcomes surrounding them. Secondly, parents tend to neglect kids during stressful moments in poverty as they prioritize other immediate obligations such as money for food over interacting with their children. In fact, Shepherd a researcher at Oregon State University finds this to be true holistically. She finds that poverty causes caregiver stress, which in turn causes physical neglect for the child (Shepherd, 2012). In fact, child abuse and neglect are found to be statistically higher among underprivileged families. The child is neglected the parent prioritizes economic obligations over maintaining the condition of their child’s health and education. In fact, 22% of children in the lowest income group lived with a depressed parent and 12.5% with a chronically stressed parent compared with 6% and 3.5% respectively among children in the highest income group (Spencer 2008). Clearly, underprivileged parents are generally more overwhelmed and have more reason to neglect their kids. Shepherd also finds, similar to Evans, that poverty in of itself does not cause physical neglect. Instead, it is the caregiver’s stressful reaction to the poverty that causes the physical neglect.

Several other hypothesis and alternative explanations exist regarding relationship between poverty, stress, and cognitive function. Mani finds that poverty in of itself reduces cognitive capability; however this is not due to stress (Mani et al., 2013). Rather “poverty-related concerns consume mental resources, leaving less for other tasks” (Mani et al.,

the limited cognitive resources we possess, and limits the cognitive resources available for other activities. These findings appear to be similar to what was discussed earlier; for instance, it can be argued that stress is holding our attention and reducing our mental capacity. However, the typical biological responses that are associated with increased stress, such as an increase in cortisol levels, are absent even with diminished cognitive capacity. Thus, this research reveals that even if poverty causes stress, it's not a factor in diminished cognitive capacity.

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Solving for poverty at its root is evidently very difficult. As shown earlier, the majority of research, excluding that of Mani, concludes that stress caused by poverty, not poverty itself, leads to impaired cognitive development for children and child neglect. Thus, a majority of the research concludes that a method of reducing poverty can be the amelioration of health that is impaired through stress. This would increase cognitive functions and help educate the underprivileged, which would then allow them to develop critical thinking skills. This development of critical thinking is important as it allows for underprivileged people to solve problems facing them, without burdening themselves with stress as they had done previously. This in turn would decrease all the negative effects associated with stress on health and cognitive function (Bauer and Boyce, 2004). Interestingly, it has been empirically proven that health improvement is maximized through indirect effects from increases in education rather than direct efforts to enhance health. Therefore, education not only directly helps one to remove himself from the poverty cycle but promotes healthier behaviors and increases health literacy to alleviate stress and subsequent diminished cognitive function (UNICEF 2002).

Overall, poverty represents a problem that has been unsolved for millennia. Recent research into

the association between poverty and stress opens up a field of solutions that have not been extensively explored. Specifically, the research indicates that poverty causes stress, which in turn causes adverse health and cognitive outcomes as well as child neglect. These consequences are huge barriers for any child to escape the clutches of poverty. By solving for stress and the health outcomes associated with it, we limit stress's negative impacts on underprivileged individuals. The optimal solution seems to be advances in education. In fact, research suggests that childhood programs such as Head Start Program by the US Department of Health and Human Services can result in improvements in cognitive development in the future (Bauer and Boyce, 2004). If one does not accept stress as the internal link from poverty to negative cognitive outcomes, then the above assertions might not hold true. However, if one accepts that poverty causes stress, which then causes decreased health outcomes, education seems to be the answer in thwarting poverty.

References

- Bauer, A. M., & Boyce, W. T. (2004). Prophecies of Childhood: How Children's Social Environments and Biological Propensities Affect the Health of Populations. *International Journal of Behavioral Medicine*, 11(3), 164-175.
- Evans, G. W., Brooks-Gunn, J., & Klebanov, P. K. (2011). Stressing Out the Poor. Retrieved from http://www.stanford.edu/group/scspi/_media/pdf/pathways/winter_2011/PathwaysWinter11_Evans.pdf
- Haushofer, J., de Laatu, J., & Cheminu, M. (2012, October). Poverty Raises Levels of the Stress Hormone Cortisol: Evidence from Weather Shocks in Kenya.
- Mani, A., Mullainathan, S., Shafrir, E., & Zhao, J. (2013). Poverty Impedes Cognitive Function. *Science*, 341(976), 976-980. Retrieved from http://www2.warwick.ac.uk/fac/soc/economics/staff/academic/mani/mani_science_976.full.pdf
- Shepherd, J. R. (2012, March). Poverty and Child Neglect: Subtypes of Neglect and Stress as a Mediator. Spencer, N. (2009). Health Consequences of Poverty for Children. 2002 UNICEF ANNUAL REPORT (UNICEF, Comp.). (2002). Retrieved from http://www.unicef.org/publications/files/pub_ar02_en.pdf

Image Sources

"CoR - European Platform against Poverty and Social Exclusion." CoR - European Platform against Poverty and Social Exclusion. Europe 2020 Monitoring Platform, n.d. November 31, 2013.

Straub, Gerry. "Poverty and Prayer." March 10, 2008. Gerry Straub's Blog. Wordpress.