

Social Determinants of Health Supplementary Materials

1. Nerem RM, Levesque MJ, Cornhill JF. Social environment as a factor in diet-induced atherosclerosis. *Science* 1980; 208(4551):1475-6 (Jun 27).

Link: <https://www.science.org/doi/abs/10.1126/science.7384790>

This early study demonstrated that kindness produces positive health effects, in an animal model. A series of subsequent controlled trials validated that finding. One more recent study, for example, addressed a broader set of social settings in a rabbit model:

McCabe PM, Gonzales JA, Zaias J, *et al.* Social environment influences the progression of atherosclerosis in the Watanabe heritable hyperlipidemic rabbit. *Circulation* 2002; 105:354-9 (Jan 22).

Link: https://www.ahajournals.org/doi/10.1161/hc0302.102144?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed

Finally, these and other sources are cited in Dr. Kelli Hardings book on the topic: Harding, Kelli. *The Rabbit Effect*. New York, NY: Atria Books, 2019.

Link: https://amazon.com/Rabbit-Effect-Healthier-Groundbreaking-Kindness/dp/1501184261/ref=tmm_hrd_swatch_0?encoding=UTF8&qid=1648231988&sr=8-1

2. A selected series of studies, books, and commentary articles examining the social circumstances that allow newborns to grow and develop normally:

During the breakup of the Soviet Union, several formerly communist Eastern European nations faced very high rates of newborn children given over to the care of the government. There was not enough capacity to place all such infants in homes; out of necessity, some received care in institutions (orphanages). The program's leadership used the circumstances within which they found themselves to create a "natural" randomized controlled trial.

Nelson CA, Zeanah CH, Fox NA, Marshal PJ, Smyke AT, Guthrie D. Cognitive recovery in socially deprived children: The Bucharest Early Intervention Project. *Science* 2007; 381(5858):1937-40 (Dec 21).

Link: https://www.science.org/doi/10.1126/science.1143921?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed

Mala Szalavitz commented on the findings of the Bucharest Early Intervention Project, and other similar studies, in an opinion piece published in the Huffington Post's blog:

Szalavitz M. How orphanages kill babies – and why no child under 5 should be in one. *Huff Post Blog* June 23, 2010.

Link: https://www.huffpost.com/entry/how-orphanages-kill-babie_b_549608

Szalavitz, in partnership with Dr. Bruce Perry, published a book on the same topic. It addresses the underlying issues in much greater detail:

Szalavitz, Maia, and Perry, Bruce D. *Born For Love: Why Empathy Is Essential – and Endangered*. New York, NY: William Morrow, 2010.

Link: https://amazon.com/Born-Love-Empathy-Essential-Endangered/dp/006165678X/ref=tmm_hrd_swatch_0?_encoding=UTF8&qid=1648232845&sr=8-1

3. Findings regarding social environment during the neonatal period extend into early childhood. Perhaps the most famous such study, which triggered a series of subsequent investigations, was the Adverse Childhood Experience (ACE) study:

Felitti VJ, Anda RF, Nordenberg D, *et al*. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults – the Adverse Childhood Experiences (ACE) study. *Am J Prev Med* 1998; 14(4):245-58.

Link: [https://www.ajpmonline.org/article/S0749-3797\(98\)00017-8/fulltext](https://www.ajpmonline.org/article/S0749-3797(98)00017-8/fulltext)

Werner & Smith tracked a cohort of “at risk” children from birth (in 1955) to adulthood. They identified factors that changed some children’s life course and health:

Werner EE, Smith RS. *Overcoming the Odds: High-Risk Children from Birth to Adulthood*. Ithaca, NY: Cornell University Press, 1992; pg. 205.

Link: <https://amazon.com/Overcoming-Odds-Children-Birth-Adulthood/dp/0801480183/>

4. Social environment’s impact on human health and well-being extend to adults, as well. Marmot introduced the idea of “social status” as a source of health-impacting stress. He called it ‘status syndrome.’ A great many other researchers have contributed to that literature, especially as it links to race, ethnicity, and other potential differentiators of social role. Marmot published a short summary article in the *Significance Magazine* in 2004, alongside a more complete book released the same year:

Marmot M. Status syndrome. *Significance* 2004; 1(4):150-4 (Dec).

Link: <https://rss.onlinelibrary.wiley.com/doi/full/10.1111/j.1740-9713.2004.00058.x>

Marmot, Michael. *Status Syndrome – How Social Standing Affects Our Health and Longevity*. New York, NY: Henry Holt and Company, 2004.

Link: <https://amazon.com/Status-Syndrome-Standing-Affects-Longevity/dp/0805078541/>

5. Sir Nigel Crisp played critical leadership roles in leading and reforming the English National Health System (NHS). His book on “health” summarizes the topic nicely:

Crisp, Nigel. *Health Is Made At Home Hospitals Are For Repairs – Building a Healthy and Health-Creating Society*. Billericay, Essex, United Kingdom: SALUS Global Knowledge Exchange, 2020.

Link: <https://amazon.com/Health-made-home-hospitals-repairs/dp/1838031308/>