

# Maternal and child health: is making ‘healthy choices’ an oxymoron?

Felicia M. Low<sup>1</sup> , Peter D. Gluckman<sup>1</sup> and Mark A. Hanson<sup>2</sup> 

**Abstract:** The right to exercise choice is fundamental to the Universal Declaration of Human Rights, and it is assumed that all individuals generally enjoy freedom of choice in managing their health. Yet closer examination of this assumption calls into question its credibility and validity, especially with regard to maternal and child health around the globe. We argue that the concept of individual ‘healthy choice,’ particularly as applied to those with inadequate support and who are relatively disempowered, is flawed and unhelpful when considering the wider social, economic, and political forces underlying poor health. We instead propose that the realistic promotion of healthy choices requires acknowledging that agency lies beyond just the individual, and that individuals need to be supported through education and other structural and policy changes that facilitate a genuine ability to make healthy choices.

**Keywords:** Policy/politics, public health, maternal health, children

---

A recent ground-breaking study quantified neonatal, infant, and child deaths from 2000 to 2017 at national and sub-national levels in 99 low to middle income countries (1). Although globally 60% of the local districts examined showed sustained progress, the authors calculated that 58% of 123 million deaths could have been prevented had all areas experienced the same mortality rates as the best-performing regions in their country. Similar issues exist in high-income countries where there can be vast differences in health outcomes by geography and ethnicity. Inequalities are also apparent in prevention of communicable disease and poor nutrition (2,3) and the issue of the factors influencing choice in poor-resource settings has been widely discussed (e.g., 4).

Governments, agencies, and healthcare professionals need to make prudent choices to reduce such tragic and avoidable maternal and child deaths, informed by data such as that referred

to above, in order to target interventions effectively. Such choices may be essential for progress toward achieving United Nations Sustainable Development Goal 3.2, namely, to end preventable child deaths by 2030. At first sight, the results from the study above appear to suggest that greater attention should be paid to preventing such deaths in regions now clearly shown to be at high risk. However, as the authors point out, when the size of the population is greater in low-risk areas, the ‘prevention paradox’ (5) operates such that the burden of preventable deaths is actually greater there than in high-risk areas.

Should the focus of intervention therefore be at the whole population level, rather than being directed largely at high-risk regions? Answering this question requires thinking about factors associated with poor health in high- versus low-risk areas, and especially the extent to which citizens are free to influence such aspects through their own agency. It

1. The University of Auckland, Auckland, New Zealand.
2. University of Southampton, Southampton, Hampshire, United Kingdom.

Correspondence to: Mark A. Hanson, University of Southampton, Mailpoint 887, Southampton, Hampshire SO16 6YD, UK. Email: m.hanson@soton.ac.uk

*(This manuscript was submitted on 1 June 2020. Following blind peer review, it was accepted for publication on 24 September 2020.)*



*Global Health Promotion* 1757-9759; Vol 28(3): 66–69; 967351 Copyright © The Author(s) 2020, Reprints and permissions: <http://www.sagepub.co.uk/journalsPermissions.nav> DOI: 10.1177/1757975920967351 [journals.sagepub.com/home/ghp](http://journals.sagepub.com/home/ghp)

should be borne in mind that the issues may be different in low- versus high-income countries, where additional factors such as poor infrastructure and opportunity cost might require consideration.

### Individual choice

Much public policy for women's and children's health is based on the concept of promoting better individual choices, whether in terms of modifying behaviors or receiving access to healthcare services. However, choosing to adopt healthy behaviors depends on the interrelating triad of capability, opportunity, and motivation (6). Our recent analysis of national maternity data in England for 2017 showed that unhealthy behaviors before pregnancy, in terms of smoking, obesity, or low folate status, were most prevalent in the adolescent age group, and their presence was associated with other social problems such as drug or alcohol misuse, migration status, and domestic violence (7).

Such studies emphasize that making healthy choices is difficult for members of the population who live in low-resource settings and who are socially, educationally, economically, or politically disadvantaged. Unhealthy choices may be more attractive in terms of availability or affordability. Indeed, arguments from life history theory and evolutionary medicine suggest that the unconscious unhealthy choices made in such contexts are not inappropriate if a long life is not anticipated (8). Without a degree of agency resulting from some financial stability, and a sense of empowerment and independence, the concept of 'healthy choices' can appear to be merely convenient and hollow rhetoric.

### Choices by the state

While there is a spectrum, governments that lean toward neoliberal policies tend to favor freedom of choice about health behaviors by their citizens, rather than focusing on the broader social factors underlying health – and especially health of individuals during early development. In times of austerity or during a pandemic, during which health inequalities are arguably magnified, choosing policies aimed at addressing the wider social determinants of health may be deemed too expensive and therefore not prioritized.

The effects on women's and children's health are particularly acute. For example, by 2017/18 in the UK, one third of children (4.6 million) were living in poverty. They are more likely to have had a lower birthweight, to die in the first year of life, or to be obese in childhood (9). These are all risk factors both for poor mental health in later childhood and beyond, and for chronic illness in adulthood. In New Zealand, child poverty rates doubled during the late 1980s and 1990s (10), a period during which there were big shifts in the political economy toward economic liberalism.

### Social embodiment – beyond choice

The field of the developmental origins of health and disease (DOHaD) has, over the last three decades, provided insights into the ways in which the environment during early development affects the risk of later conditions such as non-communicable diseases (11). More recently, DOHaD research has been extended to environmental effects on the neurocognitive and emotional development of young children. It is increasingly appreciated that epigenetic processes provide the mechanistic basis for DOHaD phenomena, by affecting gene expression in the developing embryo, fetus, and child without altering the inherited genetic makeup (12).

It is now clear that such processes operate in all pregnancies across the whole population, not just at extremes such as maternal obesity or malnutrition. Yet fetuses, infants, or children themselves have no ability or opportunity to make any choices. This lack of agency then extends to the adolescent or young adult, particularly to girls, who are less likely to remain in school and to have equal access to nutritional or other health requirements. These processes reflect the operation of wider system effects, including socioeconomic and ethnic factors, and the influence of peers and neighbours, which become embodied in individuals and pass from generation to generation (13). To this extent, the processes are largely beyond the realm of individual choice.

DOHaD research emphasizes that some of the factors that influence development in the 'first 1000 days' of life, from conception to age 2 years, are actually in place before a couple conceive a child, giving a new impetus to health promotion and advice in the preconception period. Thus, there

could be a role for supporting prospective parents to make healthy choices. This accords with recent initiatives in, for example, engaging adolescents in co-creating initiatives to promote their health now, and in turn that of the next generation (14).

### Can populations make healthy choices?

When individuals do not realistically have a choice, whether as a result of lack of capability or opportunity, or of demotivating socioeconomic contexts, then this reflects the failure of society to accord them the right to those aspects of life which permit choice. It implies a need for a broader perspective by policy makers.

This raises the question of whether healthy choices can be made by populations and their agents, the policy community. Where democratic governments have the well-being of their populations firmly enshrined in health policy statutes, then choices are arguably being made at the population level. These are most often executed through the resulting legislation, such as taxation on sugar-sweetened beverages, banning smoking in public places, supporting antenatal care, or financing parental leave.

However, it has to be recognized that risks to health, especially from the wider environment, are increasingly out of the control of vulnerable populations or even the jurisdiction of their governments. For example, with respect to many of the factors DOHaD research considers, fundamental changes in food systems or in women's equity are beyond the capacity of the individual or population to effect change.

### Facilitating healthy choices

We argue that there are realistic opportunities to assist the promotion of healthy choices, from the level of citizens to that of international bodies. However, this requires acknowledging where agency lies.

Firstly, we believe that the key to improving the decision-making ability of those for whom it is most critical to make healthy choices lies in education. Curricular modifications are needed so that children are supported from what is arguably the most critical stage of life – the pre-school years – and onwards, in developing the cognitive and emotional

skills essential for well-being, especially in the digital world, and for being resilient toward unforeseen challenges (15).

Secondly, in terms of healthcare support, the insight that the interventions should operate across the entire population argues for renewed investment in social medicine. Structural changes are needed to avoid social structures limiting individuals and societies from reaching their full potential (16). A shorter-term and necessary initiative would be to prioritize funding for the interdisciplinary research necessary to develop such initiatives and to monitor their success.

Thirdly, we suggest that the inability of many individuals and population groups to make healthy choices should be revisited at the policy level. To pass responsibility onto individuals in contexts where they cannot make choices constitutes irresponsible and poor policymaking. While greater agency follows social and economic progress, this will be hampered by intergenerational echoes of previous challenges or ill-health and other systemic or structural aspects. Governments in countries at all levels of income and with different economic models need to avoid the trap of assuming that individuals have agency when this is not the case for many contemporary challenges to health. We propose that there is a critical need to consider the nature of institutions necessary to deal with rapidly emerging new health threats, such as pandemics, from the environment at an international as well as national level.

### Conclusion

Although much attention has focused on the right of individuals to exercise choice over whether and how to live healthy lives, we argue that this is highly challenging, given the wider political and societal forces that underpin such choices, especially for the socially disadvantaged. Nevertheless, the ability to make healthy choices to improve maternal and child health can be facilitated by structural and policy changes that more accurately reflect where agency lies.

#### *Declaration of conflicting interests*

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

### ORCID iDs

Felicia M. Low  <https://orcid.org/0000-0001-7136-9997>

Mark A. Hanson  <https://orcid.org/0000-0002-6907-613X>

### References

- Burstein R, Henry NJ, Collison ML, Marczak LB, Sligar A, Watson S, et al. Mapping 123 million neonatal, infant and child deaths between 2000 and 2017. *Nature*. 2019; 574: 353–358.
- De Cock KM, Fowler MG, Mercier E, De Vincenzi I, Saba J, Hoff E, et al. Prevention of mother-to-child HIV transmission in resource-poor countries: translating research into policy and practice. *JAMA*. 2000; 283: 1175–1182.
- Piwoz EG, Bentley ME. Women's voices, women's choices: the challenge of nutrition and HIV/AIDS. *J Nutr*. 2005; 135: 933–937.
- Lawrence W, Barker M. A review of factors affecting the food choices of disadvantaged women: Workshop on 'Changing nutrition behaviour to improve maternal and fetal health'. *Proc Nutr Soc*. 2009; 68: 189–194.
- Rose G. Strategy of prevention: lessons from cardiovascular disease. *BMJ*. 1981; 282: 1847–1851.
- Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci*. 2011; 6: 42.
- Stephenson J, Vogel C, Hall J, Hutchinson J, Mann S, Duncan H, et al. Preconception health in England: a proposal for annual reporting with core metrics. *Lancet*. 2019; 393: 2262–2271.
- Nettle D. Dying young and living fast: variation in life history across English neighbourhoods. *Behav Ecol*. 2010; 21: 387–395.
- Wickham S, Anwar E, Barr B, Law C, Taylor-Robinson D. Poverty and child health in the UK: using evidence for action. *Arch Dis Child*. 2016; 101: 759–766.
- Fletcher M, Dwyer M. A Fair Go for All Children: Actions to Address Child Poverty in New Zealand. Wellington: Office of the Children's Commissioner and Barnardos; 2008.
- Hoffman DJ, Reynolds RM, Hardy DB. Developmental origins of health and disease: current knowledge and potential mechanisms. *Nutr Rev*. 2017; 75: 951–970.
- Bianco-Miotto T, Craig JM, Gasser YP, van Dijk SJ, Ozanne SE. Epigenetics and DOHaD: from basics to birth and beyond. *J Dev Orig Health Dis*. 2017; 8: 513–519.
- Loi M, Del Savio L, Stupka E. Social epigenetics and equality of opportunity. *Public Health Ethics*. 2013; 6: 142–153.
- Bay JL, Vickers MH. Adolescent education: an opportunity to create a Developmental Origins of Health and Disease (DOHaD) circuit breaker. *J Dev Orig Health Dis*. 2016; 7: 501–504.
- Henderson N. Resilience in schools and curriculum design. In: Ungar M (ed.). *The Social Ecology of Resilience: A Handbook of Theory and Practice*. New York, NY: Springer New York; 2012, pp.297–306.
- Farmer PE, Nizeye B, Stulac S, Keshavjee S. Structural violence and clinical medicine. *PLOS Med*. 2006; 3: e449.