Unintended Consequences, or Pre-Existing Barriers? A Commentary on Barnhill and Devine.

In this case discussion, Barnhill and Devine collect and present a significant amount of recent research on the various reasons why people struggle to succeed in weight loss programs. Specifically, the authors focus here on what they call 'behavioural weight loss interventions' (BWLIs), which are "research, clinical, or public health efforts to promote individual healthy eating and physical activity behaviours." (p X) As defined, this is a very broad category of interventions, and presumably includes all kinds of dieting and weight-loss programs or promotion efforts short of private or independently-chosen programs (such as opting to follow a diet book, or the like). The authors argue, in a nutshell, that these clinical, research, and public health interventions have low efficacy, and while they may have some health or other benefits, the balance of evidence presented shows that they harm people in a range of ways.

The research presented in this discussion is important and interesting, especially when it comes to what the authors consider the unintended consequences of BWLIs. First, it is encouraging to see reflection on outcomes other than ~~those intended, i.e.~~ weight loss success (the intended results of interventions), as the~~se unintended outcomes, as the~~ authors demonstrate the unintended consequences ~~,~~ are important. In reflecting on the research presented here, it appears to be the case that, on the long and varied list of things presented as consequences of BWLIs, many of these are not *consequences* of the intervention at all, but conditions that predate them. For example, in the section of the discussion focussed on economic costs, the authors write that "low income parents may hesitate to invest in foods that will not be eaten… or to allocate too much money to food in a limited budget. There may be higher *time*… and opportunity costs associated with healthy eating." (p X) The evidence of these constraints upon low-income families is convincing, but what strikes the reader is that these features of life are not the result of the weight loss intervention itself, but a condition of the existing food, economic, and social environment in which many families live.

While studying environmental conditions may help to explain why BWLIs often fail, it seems clear that the interventions do not cause the conditions. This is an important distinction. While the authors present these issues as outcomes of BWLIs by grouping them with other unintended consequences, and argue that we should improve research and monitoring around the various outcomes of BWLIs, their work points to a serious implication for BWLI implementation and design. That is, there are certain conditions in which a BWLI is predictably going to fail, or cause negative outcomes for the target group. In investigating these interventions and socio-economic or other conditions, it is important to note in which direction causation is moving. The barriers to success in BWLIs may be (likely are) in the structure of the food environment or socio-economic contexts themselves. These interventions, if they are to be implemented at the individual level, must be designed with these pre-existing barriers in mind in order to find success. Or, better yet, perhaps they should be designed at the population level instead. This part of the authors' discussion hints at, I think, the need for structural or systemic interventions, rather than individual behavioural ones.

Barnhill and Devine say that there are four ways in which the unintended consequences of BWLIs have practical and ethical import. These are, first, that negative consequences may matter

as barriers to behaviour change; second, that these consequences could be elicited or exacerbated by interventions, and that this might be of interest to policymakers; third, that we might consider these outcomes ethical matters; and fourth, that these consequences will have bearings on research ethics within the interventions. It seems, naturally, that the first two ways in which consequences matter are importantly connected. For example, stress, familial tension, or financial strain, which act as barriers to the success of BWLIs, could be important public health targets in their own right, and be targets of policy.

Barnhill and Devine argue that research must be conducted on a wider range of possible outcomes of BWLIs, to gain a full picture and accurate measurement of their impact. It seems very plausible that financial strain or family tensions, for example, could be exacerbated by the introduction, alongside a weight-loss intervention, of new demands upon limited time or money. However, the suggestion that more research on BWLIs should be done to measure a broader range of issues seems at odds with the amount and quality of research presented by Barnhill and Devine. Surely, given the evidence we already have, we should be expending efforts to alter the contexts in which BWLIs are deployed. Minimising 'negative trade-offs' of adopting healthier behaviours, for example, seems like a prerequisite to improving health and contributing to flourishing lives. Allowing people to have the kind of lives in which there is time for meal preparation alongside other valued family activities, and of relieving intense stress, is really about ensuring that families have the resources within the boundaries of a 40-hour work week to provide for themselves in a minimally decent way. It is a question of secure income, employment, and housing, among other policy-bound essentials.

Though the article brings together all kinds of research, the authors suggest that we should do more research on BWLIs because this could help to illuminate the socio-economic problems that hamper their success. I would argue that we have sufficient understanding, at this point, of these socio-economic conditions. We have decades of research on the social determinants of health starting with the Whitehall Study of British Civil Servants (Marmot 1978, 1991; Davey Smith 1990) and the Marmot Reviews (2010), and continuing into studies from many different jurisdictions and cultures (Deaton 2018), including those studies that Barnhill and Devine themselves cite, which all points in the same direction. There is plenty of research if only we would attend to it, and found the political will to act on it.

Thus, while I think Barnhill and Devine have done the field of public health a service in bringing together all of this research into one article, I disagree with the recommendation that we do more research into implementing BWLIs and studying their failures or negative outcomes. Given what the authors say here, such a continuation of research seems unnecessary, and unnecessarily harmful. These behavioural approaches, as the authors demonstrate, are fraught with issues. Let's set these aside, and focus on the structures underlying the barriers to living healthy and flourishing lives, instead.

References:

Davey Smith, G., Shipley, M. J., & Rose, G. (1990), 'Magnitude and causes of socioeconomic differentials in mortality: Further evidence from the Whitehall Study,' *Journal of Epidemiology and Community Health, 44*(4), 265–270.

Deaton, A. (2018) 'The U.S. Can No Longer Hide from Its Deep Poverty Problem,' *New York Times*, Opinion Section: 24 January. Available at: https://www.nytimes.com/2018/01/24/opinion/poverty-united-states.html?smid=tw-share.

Marmot, M. G., Rose, G., Shipley, M., & Hamilton, P. J. (1978), 'Employment grade and coronary heart disease in British civil servants,' *Journal of Epidemiology and Community Health*, *32*(4), 244-249.

Marmot, M. G., Stansfeld, S., Patel, C., *et al*, (1991), 'Health inequalities among British civil servants: The Whitehall II study,' *The Lancet*, *337*(8754), 1387-1393.

The Marmot Review (2010), 'Fair Society, Healthy Lives: Strategic Review of Health Inequalities'