

Chapter 3

Commitment Devices for Health: Theory and Evidence on Weight Loss

Manu M. Savani

 <https://orcid.org/0000-0001-6621-8975>

Brunel University, UK

ABSTRACT

This chapter examines how and why commitment devices have been used for weight management and frames research priorities going forward. A theoretical framework drawing on Thaler and Shefrin motivates the use of commitment devices to change health behaviours. An original taxonomy separates commitment devices into three distinct types. A review of the empirical literature, with a focus on unexpected findings that defy theoretical predictions, indicates that commitment devices (1) can have positive effects on health behaviours, but (2) can also have unintended effects, which warrants further research attention to under-theorised issues of ‘commitment overload’ and ‘moral licensing’, and empirical testing of online commitment strategies. The COVID-19 pandemic emphasises the need for innovative but evidence-based digital health interventions. The chapter closes with suggestions for policymakers considering commitment devices for preventative health behaviours.

INTRODUCTION

The growth and trajectory of obesity has led to its being described as a public health ‘epidemic’ (Butland et al., 2007, p. 17; Johnson, Li, Kuh, & Hardy, 2015), with severe consequences in the decades to come if effective action is not taken. The problem is not confined to richer nations, and the WHO uses the term “globesity” to convey the “escalating global epidemic of overweight and obesity” (WHO, 2015). Policy makers appear to be more willing to address the ‘obesogenic environment’ through sugar taxes and advertising bans, but these policy measures ultimately rely on individual-level behaviour change to deliver sustained weight management and public health improvements (Forman & Butryn, 2015).

DOI: 10.4018/978-1-7998-2731-3.ch003

There are numerous resources to help individuals identify and tailor healthy behaviours to their lifestyles. But to really work, any health plans need to be sustained over time, and this is where the time inconsistency problem might arise: how to stay on track with a health goal where the costs of behaviour change are both immediate and substantial, while the benefits are delayed to an uncertain future? Preventative health behaviours, such as staying on a balanced diet and taking regular physical exercise, involves intertemporal choices: trade-offs between satisfying our current desires and achieving our longer term objectives (Rogers, Milkman, & Volpp, 2014). Faced with such a trade-off, it is easy to choose a short-term gain over future wellbeing (O'Donoghue & Rabin, 1999). Such 'present bias' can explain the failure to follow up on good intentions with concrete action (Liu, Wisdom, Roberto, Liu, & Ubel, 2014), and has been linked empirically to weight management issues (Fan & Jin, 2013).

Commitment devices – strategies to influence your future choices for the better – are expected to combat time inconsistency (Strotz, 1955; Thaler & Shefrin, 1981), and support the achievement of health goals (Liu et al, 2014). They belong to a wider set of ideas in behavioural public policy designed to address the biases that lead to poor decision-making. Thaler and Shefrin (1981) applied their planner-doer framework to time-inconsistent behaviour around economic choices. This chapter extends their framework to preventative health behaviours. Like savings behaviours, preventative health behaviours require some investment today – time, money, effort, leisure or pleasure foregone – in order to reap the benefits many years from now. People make plans with their future good health in mind. When the moment comes to adopt that preventative behaviour, they may find themselves deviating from those plans because, at that moment for action, the costs loom large relative to the benefits. A gap opens up between intentions and actions (Rogers et al 2015), with adverse consequences for long run health and wellbeing. If commitment strategies can help keep people on track with their plans for preventative health behaviours, they may have a role to play in public health programmes (Savani, 2019).

Commitment devices have been shown to promote smoking cessation (Gine, Karlan, & Zinman, 2010; Halpern et al., 2015), exercise (Prestwich et al., 2012; Royer, Stehr, & Sydnor, 2015) and a switching to safer water sources (Inauen, Tobias, & Mosler, 2014). Where commitment devices have been tested as weight management aids they have shown some promising results.¹ Financial commitment devices in the form of a deposit contract stake money on achieving a weight loss outcome have been shown to have positive short term effects (Volpp et al., 2008). An alternative form of commitment device relies on reputational rather than monetary stakes, and these too have been shown to promote weight loss: Nyer and Dellande (2010) report improved weight loss when goals are posted to a public gym noticeboard; Prestwich et al (2012) report greater weight loss when exercise is planned with a partner rather than as a solo activity. However, other studies have shown more mixed results from planning and commitment strategies (Chapman, Campbell, & Wilson, 2015; Verhoeven, Adriaanse, Ridder, Vet, & Fennis, 2013).

Questions remain around the impact of reputational commitment devices, and in particular how commitment devices may promote weight loss in a digital context. Recent studies highlight the considerable potential of digital interventions to improve health, and their increasing application to a wide range of health issues including weight management (Alkhaldi, Hamilton, & Murray, 2016; Murray et al., 2016); but few studies test commitment devices in an online setting or as part of an online health programme. The gap is all the more stark as the importance of eHealth services have grown with the outbreak of Covid-19.

The global pandemic provides critical context for the subject of commitment devices for weight loss. Firstly, and though there is much we do not yet know about the links between Covid-19 and obesity, scholarly discussion suggests obesity and diabetes are risk factors for more severe effects from the virus

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/commitment-devices-for-health/269974

Related Content

Fighting Poverty in the United States

(2020). *Reshaping Social Policy to Combat Poverty and Inequality* (pp. 73-103).

www.irma-international.org/chapter/fighting-poverty-in-the-united-states/257885

Transforming Teachers Through Professional Development Distance Learning Programs

Eirini Tzovla and Katerina Kedraka (2023). *Implementing Transformative Education With Participatory Action Research* (pp. 232-253).

www.irma-international.org/chapter/transforming-teachers-through-professional-development-distance-learning-programs/329923

From the Margins to the Mainstream: Clinical Costing for Clinical Improvement

Ronald Ma (2018). *Health Economics and Healthcare Reform: Breakthroughs in Research and Practice* (pp. 311-333).

www.irma-international.org/chapter/from-the-margins-to-the-mainstream/186090

Work 4.0: The Future of Ethics in Professions in Portugal

Nuno Cruz, Ana Carvalho and Sandra Duarte (2024). *Research Anthology on Business Law, Policy, and Social Responsibility* (pp. 2033-2053).

www.irma-international.org/chapter/work-40/335820

Application of Bioinformatics in Cancer Prediction and Prognosis

Bekaddour Abdel Madjid (2023). *Advanced Bioinspiration Methods for Healthcare Standards, Policies, and Reform* (pp. 183-199).

www.irma-international.org/chapter/application-of-bioinformatics-in-cancer-prediction-and-prognosis/316793