



N3 Executive Coaching
The Art of Applied Neural Science

Health and Behavioral Economics (N3 Executive Coaching – Neuroeconomics)

Sources: World Economic Forum – World Health Report 2017

Precepts of behavioural economics have a profound impact on how people respond to the risk factors for lifestyle diseases. As humans make decisions in the context of these behavioural influences, they use various heuristics to make choices that do not always support good health. This method of human decision-making helped ensure the survival of prehistoric clans and saves modern people from being paralysed by the thousands of decisions that take place daily. However, these hard-wired, largely automatic rules of thumb often impair the ability to make the choices that can prevent death and disability and increase economic production. Here we review some of the precepts of behavioural economics that relate to healthy decisions and present suggestions for how to use them to increase the healthy behaviour of the population.

Forty percent of respondents cited difficulty following through on commitments as the main factor keeping them from living healthy lifestyles. Respondents from Latin America, as well as those from France (36%) were especially likely to cite lack of available time as the explanation for inactivity. Family commitments represent one key cause of the perceived time constraints, especially in the Latin American and Asia-Pacific regions. In Brazil, 35% of respondents said family commitments left too little time to pursue a healthy lifestyle; the percentage in China was 54%.

Behavioral economics.

These examples of consistent failure to adopt healthy behaviour, despite an avowed understanding of the importance of personal health, stem from the automatic, heuristic-based decision-making that protects people from investing too much cognitive energy in routine choices. People tend to reserve conscious reasoning capacity for more complex decisions. Hence, making healthy behaviour automatic and easy is a key to reducing NCD risk factors. For example, powerful narrative stories make risks immediate and compelling and can encourage healthy choices. Healthy behaviour can ripple through social networks, bringing the weight of group norms to bear on individual decisions. Loss aversion and choice architecture can be exploited to encourage health-promoting activity. We will review some of the more powerful behavioural economics precepts that can encourage healthier behaviour within the context of the human-centric health ecosystem.

Present bias: When humans want something, they want it now.

People value future earnings, future happiness and future health much less than any rational discounting model would suggest. Harmful sweets are immediately gratifying; the diet can start tomorrow. Nicotine and alcohol bring pleasure in the moment, so users become physically addicted to tobacco and use more alcohol than is healthy. Similarly, people find it difficult to make the changes needed now to protect health. Instead, they are more willing to make commitments about future actions than about actions today.

Understanding present bias suggests approaches that can improve healthy behaviour:

- Offer opportunities for individuals to commit to better behaviour in the future rather than today. This strategy is used successfully in tobacco cessation programmes and can be employed to increase exercise.
- Present choices that bundle a current pleasure with a behaviour that will lead to better health in the future, like giving recognition and rewards to those who exercise regularly.
- Emphasize the near-term advantages of healthy behaviour rather than the benefits that might be achieved (or the harm that might become apparent) decades later. Front-loading rewards for initiative helps overcome our natural propensity to procrastinate or make excuses

Loss aversion.

People experience the pain of loss more deeply than the pleasure of gain. This suggests that “sticks” are more likely to motivate individuals than economically equivalent “carrots”. Many recent studies of incentives to encourage smoking cessation or improve medication adherence were designed to offer a payment at the outset, with a provision that the payment would be forfeited if the patient were unable to keep the commitment to quit smoking or take medications regularly. People have used “commitment contracts” to encourage themselves to study or exercise. Failure to keep the contract means having to pay the amount of their commitment contract.

Framing: Context matters.

The same car looks expensive in a showroom of economy cars but seems like a bargain in a lineup of luxury cars. A disease seems less dreadful when the consequences are expressed as a survival rate rather than a mortality rate, even if the results are equivalent. Actions that exploit framing to improve health choices:

- Emphasize the benefits that can be achieved through a specific action (e.g., improving quality of life; having more years to spend with the grandchildren).
- Position benefits as altruistic and therefore intrinsically fulfilling. For example, successful vaccination programmes urge people to get shots to protect others.
- Emphasize the ease of healthy behaviour compared with many of the other activities that people voluntarily choose.
- Frame behaviour change to avoid focus on loss. For instance, underscoring the benefits of eating more vegetables rather than the sacrifice associated with eating fewer cupcakes.

Availability Narrative

People respond to what is most immediate and most familiar to their everyday experiences. Learning that a quarter of a million people have died in a natural disaster is less likely to motivate charitable giving than a heart-warming description of a child who needs surgery for a cleft palate. Similarly, people worry far more about dying in a plane crash than in a car accident, even though the likelihood of a fatal car accident is 100 times higher per mile travelled.

A plane crash has more narrative force than bland statistics about tens of thousands dying in more commonplace car accidents.

Ways to take advantage of the availability heuristic to improve health decisions:

- Tell compelling stories with familiar examples to drive an increase in healthy behaviour. Stories must reflect facts accurately, although data alone is unlikely to drive change. Rather than simply instructing people about how much their mortality risk increases for each year of cigarette smoking, show them a picture of a diseased lung.
- Use statistics to determine risks on which to focus, but de-emphasize dry, impersonal data when communicating risk. Instead, highlight easy-to-remember “that-couldhappen-to-me” facts. Instead of saying, “Smoking accounts for 30% of all cancer deaths”, tell a smoker, “Smoking is associated with 15 different kinds of cancer and your risk of lung cancer is 23 times higher if you smoke”.
- Social norms Risk factors for NCDs often travel in social circles. Those who are married to or friendly with smokers are more likely to smoke. Research indicates that new incidence of obesity correlates highly with social network membership and appears to have an epidemiological pattern similar to viral infections.
- Within groups, some people are influencers who have the power to guide the decisions of those around them.
- Marketing experts frequently use networks of influencers to encourage various shopping or other consumer behaviours. The fit and upbeat office wellness champion who speaks glowingly of a recent sports activity can attract others to participate.

Actions that take advantage of social connections to improve health:

- Try to gain the attention of influencers whose personal behaviour sets an example for their social networks.
- Incorporate social media into information campaigns and mutual support efforts.
- Ask people to make public commitments to future change, which can dramatically increase success at behaviour change.
- Get people to join a group health-improvement effort, such as a weight-loss or steps-walked team challenge

Optimism: Humans are an irrationally optimistic species.

This trait served us well in prehistory when people often existed at the edge of malnutrition and needed hope to venture out into a dangerous world to find the next meal. Optimism serves a purpose today as people compete for jobs, love and success. Lottery ticket purchasers know the odds are stacked against them, but they feel lucky and buy the weekly ticket thinking it could be the one that makes them rich. Optimism makes smokers certain they won't be among the unfortunate many who will suffer from severe lung disease. Approaches to take advantage of optimism to improve health decisions:

- Include a lottery element in health incentives to gain substantial attention for modest cost.
- Emphasize personal accomplishment in achieving healthier behaviour playing to positive self-image. Telling someone, "You look great after thinning down", can provide powerful motivation.
- Not expecting that exhortations of future harm will be highly motivating.

Figuring present bias into the equation makes it clear that the decades-away threat of respiratory disease is too weak to motivate an optimistic smoker to quit.

Depletion: People have limited attention.

The perception of constrained time and numerous demands reduces the likelihood that people will make the effort to improve their health. Even self-control might be a limited resource; exercising the discipline needed to go to the gym after work might reduce the ability to resist a pizza later. One recent study showed that diabetics lost less weight when they used a wearable device that tracked their activity. It may be that, having invested substantial mental energy to persist in achieving 10,000 steps, they were left without the psychological strength to avoid high-calorie foods.

Ways of using depletion to improve health decisions:

- Make sure that the decision to participate in a healthy activity requires no conscious decision at all whenever possible.
- Do not overwhelm people with too many choices. Physicians should not give a dozen new instructions to a patient and expect adherence. Instead, give a small prioritized list and use once-a-day pills that will address multiple conditions.
- Focus attention on approaches that have the most potential benefit while requiring the least cognitive effort of the target population. For instance, display the apples at the front of the shop and stack the candy at the back.
- Designing systems to encourage healthier behaviour requires recognition that people have a strongly developed sense of fairness. This means avoiding blame.

Individual behaviour, influenced by all the factors discussed here, is an important element in the determination of one ultimate measure of personal health. Clearly, however, other factors enter the picture as well.

For example, healthcare availability as well as quality and social and environmental factors together account for about 30% of the contribution to premature death.

Impact of various factors on risk of premature death:

- Social circumstances 15%
- Environmental exposure 5%
- Healthcare 10%
- **Behavioral patterns 40%**
- Genetic predisposition 30%

Proportional contribution to premature death Source: Schroeder, S.A. We Can Do Better – Improving the Health of the American People. N Eng J Med. 357, 1222 (2007)

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