

Abstract

Nowadays, diverse factors contributing to noncommunicable diseases (NCDs) ranging from socioeconomic status, living and working conditions, to individual behaviours and lifestyle have come to affect our health and wellbeing in a greater extent. Specifically, modifiable behaviours, such as unhealthy diet and physical inactivity, have been attributed to the increase risks of NCDs prevalence and millions of annual deaths. Taking these into consideration, policymakers rely on different policy tools, including regulation, economic incentives, and information provision to promote health. There are yet instances that hinder the usual policy tools' efficacy, particularly due to our behavioural biases. Thus, many policymakers are now taking interest in an innovative approach to health promotion in the application of behavioural economics, by implementing nudging interventions to tackle this issue.

Thai Health Promotion Foundation (ThaiHealth) and partners have utilized "nudges" in various innovative health promotion interventions to tactfully address the behavioural determinants, in addition to executing conventional policy tools concerning broader social determinants of health. One example from ThaiHealth is an integrated approach to reduce alcohol consumption, which includes "Give alcohol = Curse". These nudges provide supportive environments conducive to health, aligning with the organization's vision as well as one of key action areas identified in the Ottawa Charter for Health Promotion. Insights of this innovative mechanism and contribution to improve individual health and societal wellbeing will be reviewed, along with recommendation of nudge evaluation criteria for future health promotion interventions.

To move forward, there are several issues that need to be considered. First and foremost, effectiveness and limitations of nudges are examined. Moreover, a concern regarding insufficient understanding of nudge development process is to be addressed. Most importantly, how policymakers can further incorporate this cost-effective approach to complement existing policy tools in order to effectively promote health and wellbeing of people in Thailand will be discussed.

Determinants of NCDs

NCDs are the major causes of death globally. These diseases are driven by diverse risk factors, ranging from genetics, socioeconomic status, living and working environment, to individual behaviors and lifestyle. Specifically, modifiable behaviors have been attributed to the increased risks of NCDs prevalence and millions of annual deaths, as the World Health Organization (WHO) has shown that harmful from tobacco consumption accounts for 7.2 million annual deaths, while 3.3 million have been attributed to harmful use of alcohol (World Health Organization, 2018). These diseases may not need expensive medical treatment to prevent or cure, but healthier lifestyle is required.

Behavioural Economics and Nudge

To understand "irrationality" in human decision making and to design solutions that could be more applicable, behavioral economics has incorporated psychology into its models to study systematic patterns of deviation from optimal decision and employs the dual-system theory, which proposes that our thinking consists of two contrasting systems. The automatic System 1 is rapid, feels instinctive, and involves "gut reaction", whereas the reflective System 2 is deliberate, self-conscious, and can be trained with repetition (Kahneman, 2011). Although



"Give Alcohol = Curse", a case study

In 2008, ThaiHealth and partners initiated the intervention to establish a new social norm, that "Giving alcohol = curse". The earliest advertisement of this intervention, "Harms of alcohol", was continually broadcasted before New Year, clearly teasing the harmful effects of alcohol while exclaiming that giving alcohol as presents implies the gift givers as cursing the recipient. At the same time that year when department stores started to display New Year's gift, they agreed to collaborate with ThaiHealth and partners and introduced pre-packaged hampers, containing only non-alcoholic beverages, assorted snacks, and/or fruits. Hampers have remained alcohol-free since then, while more ads followed almost every year with the latest one in 2017 called "No one gives alcohol (as gifts) anymore" teasing expectation at a New Year's party, where alcohol bottle-sized presents turn out to be something else ranging from flashlight, doll, to umbrella.

As an alternative intervention that does not restrict ones from buying alcohol as gifts, nor impose additional tax burden, this nudging intervention has been carefully crafted for Thai people who are looking to buy presents on New Year occasion, specifically as a personal courtesy. Though it is widely acknowledged that alcohol is harmful to one's health, many people did not get to System 2 to rationally weigh the costs and benefits of giving alcohol during New Year season. System 1 was dominant in this situation due to two factors. Thais have been accustomed to pre-packaged hampers, which are very convenient to find and purchase; many did not have to think of what to put in the hampers. The other reason was that Thai social norm prescribed that the more expensive the alcohol in the hampers, the better

When mapped with the EAST framework, it is evident that this intervention has applied two out of four principles to nudge Thais toward reducing alcohol consumption (The Behavioral Insights Team, 2014). People tend to choose defaults as it is easier to do and Thais are no exception, especially with an affinity for everything convenient. This intervention has effectively employed the "Make it Easy" principle by providing alcohol-free pre-packaged hampers as default options, which have made them more likely to be bought and consequently reduced alcoholic beverage purchase in the New Year's shopping list. Simultaneously, the "Make it Social" principle has been utilized as the campaign "Giving alcohol = curse" has prescribed a new social norm that giving alcohol is no longer desirable.

Discussion

To develop more effective nudging intervention in the future, a framework is necessary, both as development guideline and evaluation criteria. This will be three steps;

- Analysing process**
 - Behavioural insight of the problem should be recognized. Psychological context, specifically the emotional pain in such situation, should be clearly understood, as well as the reasons which renders System 2 ineffective.
 - Appropriate target group should be identified. The more the intervention can be scaled up, the better.

The case study meets the acceptable level of the behavioral insight criteria, since it explains how Thais are accustomed to pre-packaged gift baskets, and how Thais are subject to the social norm of the more expensive the liquor the better. Proficient level of the target group is appropriately identified as Thais generally buy gift baskets during New Year
- Developing process**
 - Choice architecture based on EAST principles will be developed related to the analysed behaviour and target group, comprehensively.

The case study meets the acceptable level on the choice architecture criteria as it covers two out of four principles. "Make it Easy" by providing alcohol-free pre-packaged gift baskets as default options, and "Make it Social" as the campaign "Giving alcohol = curse" has prescribed a new social norm that giving alcohol is no longer desirable
- Evaluating process**
 - Positive (target) behaviour that is beneficial for individual or society should be promoted.
 - Cost-effectiveness which bears the least cost while yields the most impact should be demonstrated.

The case study meets the proficient level for both positivity and cost-effectiveness as it created changes in every level from behavioural changed, social norm changed, to the law legislation on prohibiting giving alcohol as a gif in 2008. For the cost-effectiveness, a survey in 2017 has found that the rate of people receiving alcohol as presents has decreased dramatically, from 30.5% in 2008 to only 9% in 2017 which is the major effective from the campaign.

ThaiHealth's Model

Thai Health Promotion Foundation (ThaiHealth), established under the Health Promotion Foundation Act in 2001, is an autonomous state agency funded by a 2% additional levy on alcohol and tobacco excise tax



to support health promotion movement in Thailand through the "Tri-power Strategy". With this innovative financing model, ThaiHealth endorsed 15 plans related to social determinants of health to cover the holistic health.

One approach to tackle this behavioral issue is by employing an application of behavioral economics known as a "nudge". Nudges are "purposeful changes in the choice architecture that influence peoples' behavior by making changes in the environment that guide and enable individuals to make choices almost automatically" (Lehner, Mont, & Heiskanen, 2016). When the situation does not support the use of cognitive effort and makes System 1's process more dominant than System 2's, nudges work to correct for these systematic errors (cognitive biases) in human behavior (Thaler & Sunstein, 2008). Nudges aim to promote desirable behaviour that is beneficial for individuals or society as a whole, are applied by policymakers to increase policy effectiveness, and often yield higher returns at lower costs (Benartzi, et al., 2017; Sunstein, 2014). Moreover, the EAST framework, developed by the Behavioral Insights Team, set out simple principles for policymakers and practitioners to apply behavioral insights (The Behavioral Insights Team, 2014).



Nudge Intervention Evaluation Criteria

Criteria	Level		
	Needs improvement	Acceptable	Proficient
Behavioural insight 30%	No insight of emotional pain / Does not explain why System 2 is ineffective in such situation [0]	Provides insight of emotional pain OR provides reasons for System 2's ineffectiveness (0, 15]	Provides clear insight and understanding of emotional pain AND provides reasons for System 2's ineffectiveness (15, 30]
Target group 10%	Does not indicate the target group [0]	Has a broad target group (0, 5]	Has a specific and appropriate target group (5, 10]
Choice architecture 20%	Does not use any appropriate EAST principles / Does not provide freedom of choices [0]	Applies nudge using EAST principles (0, 10]	Applies nudge using appropriate EAST principles AND clearly provides freedom of choices (10, 20]
Positivity 20%	Promotes negative/undesirable behaviour or behaviour that is not beneficial for individual/society [0]	Promotes positive (target) behaviour that is beneficial for individual/society (0, 10]	Promotes positive (target) behaviour that is beneficial for individual/society AND creates positive impact in any levels (10, 20]
Cost-effectiveness 20%	Less cost-effective compared to other available alternatives/ policy tools [0]	Equally cost-effective compared to other available alternatives/ policy tools (10, 20]	More cost-effective compared to other available alternatives/ policy tools (10, 20]

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