



## TAKE SMALL STEPS: NUDGING FOR PHYSICAL ACTIVITY

Dr. Rajiv Bandaru

MD, Assistant Professor, Medicine, ESIC Medical College, SanathNagar, Hyderabad, Telangana 500038, India

## KEYWORDS :

Currently, policy makers worldwide have explicitly acknowledged the value of insights from psychology and behavioral economics into how people make decisions. These insights form the basis of the design of nonregulatory and nonmonetary policy interventions—as well as more traditional fiscal and coercive measures. To date, much of the discussion of behaviorally informed approaches has emphasized "nudges," that is, interventions designed to steer people in a direction while preserving their freedom of choice. This soft paternalism approach has been adapted by Dr. Gopikrishna Vadlamudi to usher in changes in health behavior and motivate individuals on physical activity and movement, even if it begins with a few small steps. Dr. Vadlamudi is taking the help of the web and the smartphone to widely disseminate his information, to bring it to large mass. The website [takesmallsteps.org](http://takesmallsteps.org) has been built on the principles of captology, the use of computers as persuasive technology to induce behavioral changes.

Physical inactivity is a preventable but one of the most significant risk factor for non-communicable diseases (NCDs). Being physically active is associated with reduced risk of many diseases including cardiovascular disease, type 2 diabetes, colon cancer and obesity. The recommended 150 min per week of moderate to vigorous physical activity is only fulfilled by a small fraction of adults. Preliminary evidence suggests that in the USA, activity ranges from somewhere between 8.2% and 57.0%. North-American adults often blame "lack of time" as a main reason for inactivity, while spending a great proportion of waking hours at work. The workplace may be considered an attractive arena for increasing physical activity levels. Seven daily minutes of vigorous physical activity has been associated with a 62.0% reduction in coronary death, thus seven daily minutes of stair climbing should provide the same benefit. Stair climbing has been associated with lower blood pressure and improved fitness, and is also timesaving, compared to elevator. Dr. Vadlamudi subtly nudges the individuals to adapt all of these into one's own lifestyle. Similar interventions have also been carried out in public locations, such as malls and shopping centers, train/tram stations, airports and colleges and educational places. The typical intervention tactic that has often been used is to place a sign at the point of choice between stairs and elevator, displaying a message or image. However, an attempt to induce internal behavior change in relation to motivating oneself for movement has been few. The use of a mild approach, though apparently sounding simple, is rooted in deep psychological principles of self-determination therapy, making Dr. Vadlamudi's efforts a winning one.

Interventions work when they are created to influence decision making, while people retain their opportunity to choose freely. This is called nudging, as was first proposed by Richard Thaler & Cass Sunstein. Successful ways of influencing employees, otherwise sedentary at work, to choose stairs over elevator means a major potential increase in physical activity levels. A natural consequence would be a decrease in NCD incidence in a cost-effective, available and timesaving way. Dr. Vadlamudi is well-aware of challenging cohort of subjects, including those with movement and muscle disorders like multiple sclerosis, stroke, elderly and the infirm. Motivation for taking small steps is an important first-level intervention for these group of subjects, who are actually in the millions in the United States alone.

governmental spending in the public health sector. The rise of noncommunicable diseases (NCDs)—notably cancers, cardiovascular diseases, and diabetes—has, for decades, presented a broad series of challenges to policy making agencies in terms of promoting health and reducing the economic and social burden of disease and disability. Although these challenges are known to correlate with variables such as social level, age, and gender, they are also known to be largely preventable by reducing exposure to four main risk factors—tobacco smoking, unhealthy diet, physical inactivity, and excessive alcohol consumption. Most of these challenges have in common that they are closely associated with the consequences of modifiable individual-level behaviors, where—looking at it from a public health perspective, it may be restated that people fail to perform rationally in their own declared self-interests.

Public health promotion has traditionally relied on education, information, guidelines, campaigns, social influences, school and workplace programs, and product labeling, not only to persuade the individual to prefer more healthy lifestyles, but also to make more rational decisions relative to these preferences. However, during the past four decades, advances in behavioral economics and cognitive and social psychology have revealed how human behavior and decision making is boundedly rational, systematically biased, and unavoidably habitual owing to the interplay of psychological forces, with what ought to be, from the perspective of rationality, irrelevant features of complex decision-making contexts. Thus, one challenge, which has appeared relative to informed health policy, is determining how to modify individual-level behavior toward people's own declared self-interest despite that people are bound to make mistakes in conforming to rational standards in their behavior and decision making. despite their choice-preserving nature nudges may provide the basis for a wider regulatory strategy to modify individual-level behaviors in people's own declared self-interest, a concept known as libertarian paternalism. Dr. Vadlamudi has elegantly utilized these concepts in motivating individuals for healthy behavior.

Since the publication of *Nudge*, its ideas have gained widespread appreciation and have diffused or have been incorporated into many different sectors of public policy, including public health, where it has challenged assumptions of standard regulation efforts. It has led to the emergence of a new field of applied behavioral science referred to as nudging, which is in its infancy and comprises a mix of cross-disciplinary academics, policy makers, practitioners, and consultants with a wide range of backgrounds, competencies, and ideas about what they are doing. Dr. Vadlamudi has emerged as a "thought leader" utilizing these novel concepts for health behavior promotion.

The basic mantra of nudging is "make it easy." "Take small steps" adapt this approach. There have been some critiques of the concept of nudge in inducing health behaviors. Some may deem it to be too vague, over simplified, potentially deceptive, over reliant on individuals making the right choice, and too weak to lead to sustainable behavior change. Although it is true that when simplified, nudging is very much about promoting certain choices by making them easy, this concept is intended in the technical sense of developing evidence-based clever ways of making target choices cognitively "easy" or "intuitive" to perform against the background of

Throughout the world, societies face major challenges and massive

dual-process theories. This is done, for example, by making target choices psychologically salient, intuitive to navigate, associatively attractive, and clearly endorsed by the social environment in the context of often counterintuitive theoretical insights.

Physicians are in the business of influencing behavior. This may be in encouraging some behaviors (vaccination, cancer screening) and discouraging others (smoking, excess alcohol, physical inactivity). While we may have developed a nuanced approach to influencing the behavior of individuals that we have known for some time, it can be more challenging for policy makers seeking to influence the health behavior of whole populations. Dr. Vadlamudi's approaches of using the web and the smartphone, tools that are with a wider mass currently, is a commendable effort in this regard. Influencing behavior is not easy. We are still faced with a short supply of effective interventions that can be used to tackle major health problems. Insights from behavioral economics and the wider behavioral sciences now provide us with a powerful set of new and refined policy tools to use. Rather than being labeled as 'pop psychology,' these novel insights are built on many years of robust and cross disciplinary work and currently implemented by physician leaders like Dr. Vadlamudi. We need to appreciate that we face an increasing burden of disease related to the decisions we make. Introducing policies that better align behavior with underlying intentions – while ultimately respecting individuals' autonomy – is worthy of further consideration in the greater context of health promotion.

## References

1. WHO. Noncommunicable diseases. World Health Organization. 2015-01-21 17:48:55. Available at: <http://www.who.int/mediacentre/factsheets/fs355/en/>.
2. Yu S, Yarnell JWG, Sweetnam PM, Murray L. What level of physical activity protects against premature cardiovascular death? the caerphilly study. *Heart*. 2003;89(5):502.
3. WHO. Physical activity. World Health Organization. 2015-01-27 13:48:10. Available at: <http://www.who.int/mediacentre/factsheets/fs385/en/>.
4. Hallal PC, Andersen LB, Bull FC, Guthold R, Haskell W, Ekelund U. Global physical activity levels: surveillance progress, pitfalls, and prospects. *The Lancet*. 2012;380(9838):247–257.
5. Dishman RK, Oldenburg B, O'Neal H, Shephard RJ. Worksite physical activity interventions. *Am J Prev Med*. 1998;15(4):344–361.
6. Thaler RH, Sunstein CR. *Nudge - Improving decisions about health, wealth and happiness*. 2. London: Penguin; 2009.
7. Bloom DE, Caferio E, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, et al. 2012. The Global Economic Burden of Noncommunicable Diseases. Geneva: World Econ. Forum.
8. Vallgård S. 2012. Nudge—a new and better way to improve health? *Health Policy* 104(2):200–3.
9. Dolan P, Hallsworth M, Halpern D, et al. *MINDSPACE: influencing behaviour through public policy*. London: Cabinet Office; 2010.
10. Helmrich SP, Ragland DR, Leung RW, Paffenbarger RS. Physical Activity and Reduced Occurrence of Non-Insulin-Dependent Diabetes Mellitus. *N Engl J Med*. 1991;325(3):147–152.
11. Tucker JM, Welk GJ, Beyler NK. Physical Activity in U.S. Adults: Compliance with the Physical Activity Guidelines for Americans. *Am J Prev Med*. 2011;40(4):454–461.
12. Dishman RK, Oldenburg B, O'Neal H, Shephard RJ. Worksite physical activity interventions. *Am J Prev Med*. 1998;15(4):344–361.