



PLEASE STOP: NUDGING FOR SMOKING CESSATION

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KEYWORDS :

Smoking cessation is a major issue in the society and requires several levels of interactions: between care givers, physicians, family members and the subjects themselves. Smoking cessation can prevent 39% of deaths annually. It can prevent a wide range of diseases, including lung and heart diseases, high blood pressure and a variety of cancers. However, the problem is at the root of motivating an individual from within to quit smoking. A general comment in the clinic is rarely effective. Pharmacological options are available, but they often do not derive the desired results. Recently, I came across a smartphone application, *Please Stop*. It is backed by a website, *pleasequit.org*. The app was developed by a primary care physician, Dr. Nawal Singh Shekhawat, currently a hospitalist at Baptist Hospital Conway in the state of Arkansas. I became curious on the namesake and the woefully bland nature of the app. Why "please"? I reached out to Dr. Shekhawat to learn more on the underpinnings of the development of the app.

SF: Welcome Dr. Shekhawat. I was pleasantly surprised to learn about the app Please Stop. What motivated you to develop this?

NSS: Obviously, to motivate cessation of smoking tobacco.

SF: The app is so simple. It just mentions to stop and has a visual to demonstrate a cigarette.

NSS: Yes, that's the whole motive underlying the design – to keep the message simple. As we know, verbosity and extensive counseling do not help in stopping the use of tobacco, including smoking. So I thought deeply of creating an innovative approach to impact cessation.

SF: Sure, it is truly innovative. The website accompanying the app is also simple. Is there a special reason?

NSS: Yes. The design of the web-based components was guided by the Persuasive Systems Design (PSD) model that proposes to purposefully use technology to influence behavior change and has widely been demonstrated to influence adherence to Web-based interventions. The scientific principles used in the dissemination of health information enhances the perceived relevance of the information, and potentially its effects, without requiring the costly involvement of trained professionals, hence increasing potential for scalability and sustainability. In information technology, this is called *captology*: the use of "computers as persuasive technology" to usher in health behavior changes. The word "please" has been deliberately used: to motivate the smoker and to rethink about the habit. In the app, the phrase "stop" has also been deliberately used: the phrase quit may turn off the subject. S/he is listening to this advice everywhere, but continuation of smoking has a biological basis to the behavior. The brain circuits require the dopamine kick, which is supplemented by the event of smoking. So the neuroscience based approach will be to utilize higher cognitive functions, the faculty of deep thinking, to initiate permanent change in behavior to quit and maintain smoking cessation.

SF: It seems that there are deeper thoughts that has been utilized for your innovative app.

NSS: Sure, the aim is to influence others, to effect change, to

permanently induce smoking cessation. We as clinicians know how difficult it is motivating someone for quitting smoking, and the positive health benefits of smoking cessation.

SF: Can you elaborate?

NSS: Like it or not, we all have a powerful tool for making change: simple direct language. I have used the same principle here. We tend to have a lot of misconceptions about influence — how much of it we have, the best way to wield it. Fortunately, the reality is more encouraging than we imagine. The power of a simple, direct request is much greater than we realize.

SF: Let us talk about it in more details Dr. Shekhawat.

NSS: Business today is largely run by teams and populated by authority-averse baby boomers and Generation Xers. That makes persuasion very important than ever as a managerial tool. I extended the same business concepts for designing the app for smoking cessation. Contrary to popular belief, persuasion is not the same as selling an idea or convincing opponents to see things your way. It is instead a process of negotiating a shared solution. To that end, persuasion consists of four key elements: establishing credibility, framing to find a common ground, providing vivid evidence, and connecting emotionally, while all of these being done in a non-judgmental fashion. Credibility grows, out of two sources: expertise and relationships. The former is a function of product or process knowledge and the latter on listening to and working in the best interest of others. But even if a persuader's credibility is high, his position must make sense—even more, it must appeal—to the audience, in this case, the smokers. Therefore, a persuader must frame his position to illuminate its benefits to everyone who will feel its impact. Persuasion then becomes a matter of presenting evidence—but not just ordinary charts and spreadsheets. The most effective persuaders use vivid—even over-the-top—stories, metaphors, and examples to make their positions come alive. Finally, good persuaders can accurately sense and respond to their audience's emotional state. Sometimes, that means they must suppress their own emotions; at other times, they must intensify them. Persuasion can be a force for enormous good in an organization or in a society, but people must understand it for what it is: an often pain staking process that requires insight, planning, and compromise. I wanted to reach out to the mass, that's why I thought of developing an app and get the message straightforward.

SF: This is simply fascinating.

NSS: If leadership, at its most basic, consists of getting things done through others, then persuasion is the leader's essential tool. Many executives have assumed that this tool is beyond their grasp, available only to the charismatic and the eloquent. Over the past several decades, though, experimental psychologists have learned which methods reliably lead people to concede, comply, or change. Their research shows that persuasion is governed by several principles that can be taught and applied in daily life. The first principle is that people are more likely to follow someone who is similar to them than someone who is not. Wise managers, then, enlist peers to help make their cases. Second, people are more willing to cooperate with those who are not only like them but who like them, as well. So it's worth the time to uncover real similarities and offer genuine praise. Exclusive information is more persuasive

than widely available data. So I wanted to keep the message simple. By mastering these principles—and, using them judiciously and ethically—we can learn the elusive art of capturing an audience, swaying the undecided, and converting the opposition, in essence, to induce permanent change in behavior for the good. In our case, have a permanent deal on smoking cessation.

SF: *We all know that smoking is a very big deal in the United States, and globally.*

NSS: Surely, without a doubt. Smoking starts as a stereotype. Stereotypes are “abstract knowledge structures linking a social group to a set of traits or behavioral characteristics” that “guide the processing of information about the group”. In the early 1980s, Belk showed that consumption stereotypes are beliefs about the traits of people based on their use of products or brands that result in inferential self- and other judgments. Stereotypes are most likely to be formed when products are both noticeable and distinctive such as clothing, cars, furniture—and cigarettes. Consumption inferences have been found to impact both self-perceptions and self-esteem. Not surprisingly, then, consumers engage in impression management, choosing products that they think will project a desired image and avoiding products that might denigrate their image. It has even been argued that “the symbolism embedded in many products is the primary reason for their purchase and use”. Research indicates that children learn about consumption stereotypes from four major socialization agents: peers, media, family, and their schools. Further, children’s ability to understand consumption stereotypes is almost fully developed by the sixth grade, when they are able to think abstractly and reflectively. Once consumption stereotypes are formed, they tend to remain relatively stable. There are, however, some important exceptions to this rule. During adolescence, stereotypic beliefs about cigarette smoking, alcohol use, and illicit drug use change quite markedly from negative to neutral or even positive. Such changes can cause youngsters to engage in risky consumption behaviors that endanger their health and well-being: the start of smoking tobacco and becoming dependent on it in no time.

SF: *So your app is making a difference for the adolescents.*

NSS: Sure it will. Numerous studies show that adolescents whose friends smoke are at greater risk of starting. Direct peer pressure to smoke, in the form of cigarette offers and so forth, seems to be relatively rare. Only about 3%–12% of youngsters report experiencing direct peer pressure. It seems that most youth start smoking because they perceive that smokers are popular and well respected. In the United States, smoking rates increase sharply during grades five to 12 (per *Morbidity and Mortality Weekly Report 1998*), and youths may mistakenly interpret this trend as evidence that smoking is popular. Cigarette ads may prime or make salient the notion that smokers are attractive, successful, and healthy, an image that is frequently conveyed in movies as well. A prime is “an activating stimulus event” that causes a “pre-activation of social constructs or knowledge structures”. Primes have been found to non-consciously stimulate search for construct-consistent information. Thus, a positive smoker stereotype that is activated by cigarette ads may cause youth to inadvertently seek out favorable evidence about smokers. My app will cause cognitive dissonance, even if transiently, and will motivate individuals to quit, the earlier, the better.

SF: *What were your basis for implementing such unique principles of behavioral psychology?*

NSS: In 1998 Gordon Sinclair, the owner of a well known Chicago restaurant, was struggling with a problem that afflicts all restaurateurs. Patrons frequently reserve a table but, without notice, fail to appear. Sinclair solved the problem by asking his receptionist to change two words of what she said to callers requesting reservations. The change dropped his no-call, no-show rate from 30 to 10 percent immediately. The two words were effective because

they commissioned the force of another potent human motivation: the desire to be, and to appear, consistent. The receptionist merely modified her request from “Please call if you have to change your plans” to “Will you please call if you have to change your plans?” At that point, she politely paused and waited for a response. The wait was pivotal because it induced customers to fill the pause with a public commitment. And public commitments, even seemingly minor ones, direct future action. I find the phrase “please” to be highly powerful.

SF: *This is so unique.*

NSS: On a wintry morning in the late 1960s, a man stopped on a busy New York City sidewalk and gazed skyward for 60 seconds, at nothing in particular. He did so as part of an experiment by City University of New York social psychologists Stanley Milgram, Leonard Bickman and Lawrence Berkowitz that was designed to find out what effect this action would have on passersby. Most simply detoured or brushed by; 4 percent joined the man in looking up. The experiment was then repeated with a slight change. With the modification, large numbers of pedestrians were induced to come to a halt, crowd together and peer upward. The single alteration in the experiment incorporated the phenomenon of social validation. One fundamental way that we decide what to do in a situation is to look to what others are doing or have done there. If many individuals have decided in favor of a particular idea, we are more likely to follow, because we perceive the idea to be more correct, more valid. Milgram, Bickman and Berkowitz introduced the influence of social validation into their street experiment simply by having five men rather than one look up at nothing. With the larger initial set of upward gazers, the percentage of New Yorkers who followed suit more than quadrupled, to 18 percent. Bigger initial sets of planted up-lookers generated an even greater response: a starter group of 15 led 40 percent of passersby to join in, nearly stopping traffic within one minute. So the app in the mobile store itself is change-inducing; people visualizing it will even think for a second for quitting, and that is the initiation of a positive behavior.

SF: *So your desire is to mildly motivate individuals.*

NSS: Yes, we have been trying frank didacticism and lecture in the clinic, but let us think with clarity: How often are we successful in motivating someone for a positive behavioral change like quitting smoking altogether. I want to nudge individuals for smoking cessation. Nudging is an attractive strategy. People are faced with choices all the time, from products to pensions, from vacations to voting, from requests for charity to ordering meals in a restaurant, and many of these choices have to be made quickly or life would be overwhelming. For most cases the sensible thing is not to agonize but to use a rule of thumb—a *heuristic* is the technical term—to make the decision quickly. “If it ain’t broke don’t fix it,” “Choose a round number,” “Always order the special,” and “Vote the party line” are all heuristics. But the ones people use are good for some decisions and not others, and they have evolved over a series of past situations that may or may not resemble the important choices people currently face. Now, every decision we face presents its own “choice architecture,” in which the possibilities we have to choose from are arrayed in a certain order. Some make themselves clamorously known; others have to be unearthed. There may be limited time to make a choice and then some possibilities expire. Or if nothing is done, something may still come to pass: there are default options (as opposed to possibilities a person has to positively choose). There is no getting away from this: choices are always going to be structured in some manner, whether it’s deliberately designed or happens at random. Nudging is about the self-conscious design of choice architecture. Put a certain choice architecture together with a certain heuristic and you will get a certain outcome. That’s the basic equation. So, if you want a person to reach a desirable outcome and you can’t change the heuristic she’s following, then you have to meddle with the choice architecture, setting up one that when matched with the given heuristic delivers the desirable outcome. That’s what we do when

we nudge. The result would be a sort of soft paternalism: paternalism without the constraint; a nudge rather than a shove; doing for people what they would do for themselves if they had more time or greater ability to pick out the better choice.

SF: *Please elaborate in the context of health behavior changes.*

NSS: Consider the way lawmakers nudge people away from drunk driving. There are about 112 million self-reported episodes of alcohol-impaired driving among adults in the US each year. Yet in 2010, the number of people who were killed in alcohol-impaired driving crashes (10,228) was an order of magnitude lower than that, i.e., almost one ten thousandth of the number of incidents of DWI. The lawmakers don't say that 0.009 percent of drunk drivers cause fatal accidents (implying, correctly, that 99.991 percent of drunk drivers do not). They say instead that alcohol is responsible for nearly one third (31 percent) of all traffic-related deaths in the United States—which nudges people in the right direction, even though in itself it tells us next to nothing about how dangerous drunk driving is.

Between 15 and 20 percent of regular smokers (let's say men sixty years old, who have smoked a pack a day for forty years) will die of lung cancer. But regulators don't publicize that number, even though it ought to frighten people away from smoking, because they figure that some smokers may irrationally take shelter in the complementary statistic of the 80–85 percent of smokers who will *not* die of lung cancer. So instead they say that smoking raises the chances of getting lung cancer. That will nudge many people toward the right behavior, even though it doesn't in itself provide an assessment of how dangerous smoking actually is (at least not without a baseline percentage of nonsmokers who get cancer).

Herbert Simon (1978) suggested that a human being is not, as Thorstein Veblen famously remarked, "a lightning calculator of pleasures and pains, who oscillates like a homogenous globule of desire of happiness under the impulse of stimuli". Richard Thaler went beyond bounded rationality, and has worked on bounded willpower (with Harvard behavioral economist Sendhil Mullainathan), as well as bounded selfishness.

A grocery that places candy at eye level nudges shoppers to buy more candy without forcing them to do so. Behavioral economics has stoked enthusiasm for using nudges as tools of public policy. If elites believe Americans are too fat, then require restaurants to display calorie counts. Thaler and Sunstein call this "libertarian paternalism"—paternalistic in assuming policymakers know what diners need better than diners do and libertarian in allowing diners to make the final choice of what to eat. My design principles have heavily relied on these principles of sociology and behavioral economics, and how individuals make choices.

SF: *Thank you so much Dr. Shekhawat for this enlightening discussion.*

NSS: My pleasure. Basically, we know that inducing behavioral changes is very difficult. Per Fogg's triad, any behavior may be defined as a product of motivation, action and prompt. An individual knows that smoking can cause lung cancer, so he may be motivated to quit smoking, the action per se. What my app provides is the "prompt." My app also sets the stage for conducting randomized clinical trials to further evaluate the impact of these sociology-based interventions on creating positive health behavior and may be tested for diverse fields, including enhancing physical activity and maintaining partner fidelity.

