



## NON-COMMUNICABLE DISEASES

# Addressing tobacco smoking in South Africa: Insights from behavioural science

G Ganz, MSocSci candidate

Department of Psychology, Faculty of Humanities, University of Cape Town, South Africa

Corresponding author: G Ganz (garyganz@gmail.com)

Behavioural risk factors such as tobacco smoking contribute significantly to the global and local disease burden. This article surveys three behavioural science interventions that could reduce rates of tobacco smoking in South Africa.

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In 2000, tobacco smoking contributed to 8% of mortality and 3.7% of disability-adjusted life-years in South Africa (SA).<sup>[1]</sup> The most recent study of prevalence found that 17.6% of South Africans smoke tobacco.<sup>[2]</sup> The social and economic costs of tobacco smoking are significant, and the importance of multipronged efforts to reduce rates of smoking cannot be overstated. Alone, public education campaigns which raise awareness of the health risks associated with smoking are unlikely to have a significant impact – this is because, more so than effortful thinking, health behaviours and decision-making are strongly determined by unconscious cognitive biases and heuristics.<sup>[3]</sup> Indeed, in the past decade there has been a rise in the use of behavioural science to address issues of public health.<sup>[4]</sup> Given that behavioural risk factors, such as smoking, contribute significantly to the global and local disease burden, evidence-based behavioural interventions have much to contribute to public health.<sup>[5]</sup> This article surveys three potentially cost-effective behavioural interventions that could reduce rates of tobacco smoking in SA.

### Social norms

Perceived norms – what I think everyone else does and thinks – are a significant predictor of human behaviour.<sup>[6-8]</sup> An important finding from norms research is that we often overestimate the prevalence of and support for antisocial behaviours and underestimate those of pro-social behaviours.<sup>[8]</sup> Moreover, these misperceived norms often drive behaviour. For example, students at five schools in the USA significantly overestimated both how much bullying took place and how many people condoned bullying behaviour at their school. Increased misperception was correlated with increased bullying. An intervention that disseminated the accurate rates of prevalence and support reduced rates of bullying significantly.<sup>[9]</sup> Another social norms intervention in the USA significantly reduced rates of youth smoking initiation.<sup>[10]</sup> Since a minority (17.6%) of South Africans smoke tobacco, researchers could examine the actual and perceived norms of smoking, and construct interventions accordingly. These interventions could use nationally representative data such as the South African National Health and Nutrition Examination Survey<sup>[2]</sup> and disaggregate it into smaller areas in order to tap into salient social identities to disseminate relevant tobacco smoking norms. For example, a campaign could emphasise the fact that the vast majority of people in a particular area do not smoke, and that most people think smoking is unappealing.

### Defaults

Default options refer to ‘an option that will obtain if the chooser does nothing’.<sup>[11]</sup> Apart from cases where choice is mandated, default options are pervasive. Behavioural science research suggests that default options strongly influence choice outcomes in favour of the default.<sup>[3]</sup> For example, when a large corporation in the USA switched from voluntary (opt-in) to automatic (opt-out) enrolment in a retirement savings plan, the number of enrolled employees rose by 50%.<sup>[12]</sup>

The influence of defaults is attributed to a number of factors. Firstly, defaults are often seen as normative, or the recommended option.<sup>[8,11]</sup> Secondly, it takes effort to fill out forms or answer questions in order to make a decision. Thirdly, even when it does not take much physical effort, people tend to avoid making active decisions as they can be mentally taxing and cause unease.<sup>[13,14]</sup>

The default effect has an important application to the way in which we treat tobacco dependence. In SA, the treatment guidelines for tobacco dependence are as follows: (i) identifying all smokers, alerting them to the harms of smoking and benefits of quitting; (ii) assessing readiness to initiate an attempt to quit; (iii) assessing the physical and psychological dependence to nicotine and smoking; (iv) determining the best combination of counselling/support and pharmacological therapy; (v) setting a quit date and providing suitable resources and support; (vi) frequent follow-up as often as possible via text/telephone or in person; (vii) monitoring for side-effects, relapse and ongoing cessation; and (viii) if relapse occurs, providing the necessary support and encouraging a further attempt when appropriate.<sup>[15]</sup>

These guidelines are the norm in many countries around the world. Richter and Ellerbeck<sup>[14]</sup> point out that this particular treatment guideline deviates from the treatment of most chronic health conditions (including substance abuse) in that it is an opt-in treatment. In contradistinction, when a doctor diagnoses a patient with diabetes they do not assess the patient’s readiness before initiating treatment – that is to say, ordinarily we take an opt-out approach to treatment. Shifting the treatment default for tobacco cessation from an opt-in to an opt-out system could have significant positive benefits for public health. The authors of a meta-analysis of tobacco smoking cessation interventions conclude that ‘the evidence is sufficiently clear to recommend that doctors should offer support for cessation much more commonly than is currently the case, and

prior assessment of willingness to quit excludes many who would have taken up the offer of assistance if offered it directly.<sup>[16]</sup>

## Packaging

In the same way that emotions are used by marketers and advertisers to attract consumers to a particular brand of cigarettes, they can also be used to discourage cigarette consumption.<sup>[4]</sup> Plain packaging coupled with graphic health warnings, which elicit disgust, provide another avenue to reduce tobacco smoking in SA. Australia's implementation of plain packaging and graphic health warnings in 2012 provides an important case study. A 1-year follow-up study found an increase in rates of intention to quit,<sup>[17]</sup> and another study found a 0.55% decrease in prevalence at 34 months post intervention.<sup>[18]</sup> Perhaps most noteworthy, a study found post-intervention decreases in the appeal of cigarettes packs to youth.<sup>[19]</sup> The SA government – which ratified the World Health Organization's Framework Convention on Tobacco Control in 2005 – has already expressed support for the introduction of plain packaging.<sup>[20]</sup>

## Conclusion

Social norms, defaults, and packaging are three examples of the way in which behavioural science can contribute to issues of public health in SA. Behavioural interventions of this kind are amenable to testing in randomised controlled trials, which can help to determine their impact at scale and thereby influence policy. Researchers and policy-makers should focus their efforts on the role that behavioural science can play in developing cost-effective and evidence-based interventions to issues of public health in SA.

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