



Responding to health inequities in New Zealand: the potential of dissuasive cigarettes

Frank Houghton BA(Hons), MA, MPHe, PhD;^{1,4} Bruce Duncan MBChB, DCH, MRCGP, MSc, MFPHM, FAFPHM, FNZCPHM;² Sharon Houghton BSc(Hons), PhD, D.Clin.Psych;³ Diane O'Doherty BA(Hons), MA;¹ Derek McInerney BA(Hons), MSc, MBS, PhD¹

¹HEALR Research Group, Limerick Institute of Technology, Limerick, Ireland

²Hauora Tairāwhiti, 110 Peel Street, Gisborne 4010, New Zealand

³Department of Psychology, University of Limerick, Limerick, Ireland

⁴Corresponding author. Email: Frank.Houghton@LIT.ie

Dissuasive cigarettes attempt to de-normalise smoking by portraying cigarettes as a repellent product in counter advertising.¹ Emerging research is developing an evidence base that suggests that dissuasive cigarettes may offer significant potential in combating smoking.²⁻⁷ Much of this research has been led by researchers in New Zealand,⁸⁻¹² but further research has also been conducted in Norway⁴ and the United Kingdom.¹³

There are several means to portray cigarettes as repellent, including proposals to remove additives such as sugar and menthol, ensuring that cigarettes taste bitter and far less palatable to smokers. However, the current leading proposals designed to modify cigarettes to create 'dissuasive sticks' focus on two key areas.⁹ The first of these are proposals to print warnings directly onto the cigarettes themselves. Suggestions for the warnings include messages such as 'Smoking kills' or 'This causes cancer'.^{3,6,10} The second approach is to colour the cigarette paper itself a repellent colour. Recent research has explored the use of colours such as grey,⁵ 'slimy green', and most successfully of all to date 'faecal yellow brown'.⁹

It has long been understood by 'Big Tobacco' that the size, length, thickness and colour of cigarettes are all vital considerations in marketing their products.¹⁴⁻¹⁷ As well as marketing pink cigarettes to appeal to women, the tobacco industry has also successfully used filter tip colour and printing a gold band on cigarette sticks to heighten their allure.^{18,19} Dissuasive cigarettes are designed to undermine the

symbolic consumption of particular cigarettes brands and their associated group membership, which forms an important element of social identity. This discordance in the smoker's identity is reinforced through the second function of dissuasive cigarettes, which is to provide health education through their display of warnings such as 'FUMER CAUSE LE CANCER / SMOKING CAUSES CANCER', as proposed for Canada.^{9,20}

Dissuasive cigarettes are designed to combat tobacco use in several ways. First, they attempt to undermine positive images associated with cigarettes, most notably through branding of cigarette packs.^{9,21} The importance of branding for 'Big Tobacco' is demonstrated by its expenditure on advertising, which currently runs to over US\$750 million per month.²² Reducing the appeal of branded cigarette packs has a direct effect on symbolic consumption of a brand identity; in removing a shared group membership and identity, smokers are less likely to misconstrue brands as elegant or masculine.^{4,11}

Combatting the negative effects of tobacco use is crucial, given their impact on mortality and morbidity globally.²³⁻²⁵ Smoking remains the world's leading cause of preventable premature death.²⁶ As well as the impact of smoking on the health of smokers themselves, there are also negative effects of second-hand²⁴ and third-hand smoke,^{27,28} and emotional,²⁹ economic³⁰⁻³² and environmental costs,³³⁻³⁶ and the opportunity costs of its use and treatment. The New Zealand Ministry of Health

J PRIM HEALTH CARE

2019;11(4):311-314.

doi:10.1071/HC19013

Received 12 February 2019

Accepted 30 September 2019

Published 24 October 2019

suggests that tobacco-related illnesses account for 9% of all illness, disability and premature mortality in New Zealand.³⁷ The Ministry of Health estimates that the largest proportion of smokers are in the population cohorts aged 18–24 years (19.7%) and 25–34 years (22.3%). It is also estimated that 15% of the total population (581,000 people) are current smokers.³⁷ The financial scale of the damage caused by tobacco is estimated to be NZ\$3257 million in direct and indirect (lost productivity through premature mortality and morbidity) costs per annum.³⁸

The burden of tobacco use is not shared equally across the population of New Zealand. A concerted effort to reduce smoking is important because of both its negative effects and the inequitable distribution of its burden on Māori,³⁹ and people with mental health issues.⁴⁰ Although the smoking rate among Māori is now significantly lower than in the past, more than one-third (35%) of Māori still smoke.^{41–44} This rate is significantly higher than among people of New Zealand European and Pacific ethnicity. It has previously been suggested that one-quarter of the health gap between Māori and non-Māori is attributable to the impact of smoking.⁴⁴ The gender dimension of smoking among Māori is also notable; 38% of Māori women smoke, compared with 32% of Māori men.⁴⁵ Few populations have higher smoking rates among women than men.⁴⁵ Proposed dissuasive cigarette sticks could be viewed as a pro-equity measure, with messages on these sticks specifically targeting the female Māori population. A 2015 study highlighted how dissuasive cigarettes challenged female smokers' view on cleanliness and social acceptability of smoking.¹¹ If cigarette sticks and packs are seen as dissuasive or symbolically valuable, this may affect female smoking prevalence, including the female Māori population.

Given the intense scrutiny of tobacco promotion, advertising and sponsorship that exists in many countries including New Zealand, combined with precise controls requiring the display of graphic and anti-smoking text warnings, the lack of attention, to date, on developing dissuasive cigarettes is surprising.⁹ Cigarette sticks have been termed 'valuable real estate',⁴⁶ demonstrating the potential importance of this resource as a vehicle for health promotion. The emerging attention

given to dissuasive cigarettes is tardy given the large number of viewings dissuasive cigarettes could achieve. Based on an average consumption of a pack per day,^{47,48} with each cigarette achieving 10 viewings based on this number of inhalations ('puffs'), this could result in 73,000 exposures to dissuasive anti-smoking 'messages' per year.⁴⁶ Viewings will also be dependent on the number of other people present with smokers; these people are also a prime target for the messages. The reach of messages on cigarette sticks is much higher than for carton packaging alone.^{47,48}

Based on current trends, New Zealand will not achieve its target of becoming smoke-free by 2025.⁴¹ Not only will it probably fail to meet this target by a considerable length of time (decades),⁴¹ but compared to other countries, such as Finland, the target itself is relatively unambitious in the first place, causing continued disadvantage to already marginalised populations.⁴⁹ Combating the inequitable threat of tobacco has been a commendable tenet of New Zealand Government policy for some time; however, it is clear that the current decline in smoking prevalence is both too slow and too inequitable to justify more of the same. A comprehensive approach should be adopted to reduce smoking rates; reduce the initial smoking appeal by the implementation of dissuasive cigarettes, increase taxation to reduce affordability of tobacco products and limit accessibility to minors through increased local and national policies. The continuing damage from tobacco is such that new and innovative responses are urgently required.

Competing interests

The authors declare no competing interests.

Acknowledgement

This work did not receive any specific funding.

References

1. Anderson SJ, Glantz SA, Ling PM. Emotions for sale: cigarette advertising and women's psychosocial needs. *Tob Control*. 2005;14:127–35. doi:10.1136/tc.2004.009076
2. Ford A, Moodie C, MacKintosh A, Hastings G. Adolescent perceptions of cigarette appearance. *Eur J Public Health*. 2014;24:464–8. doi:10.1093/eurpub/ckt161
3. Moodie C, MacKintosh AM, Gallopel-Morvan K, et al. Adolescents' perceptions of an on-cigarette health warning. *Nicotine Tob Res*. 2017;19(10):1232–7.

4. Lund I, Scheffels J. Adolescent perceptions of dissuasive sticks: a web survey among 16–20 year olds in Norway. *BMC Public Health*. 2018;18:974. doi:10.1186/s12889-018-5847-1
5. Gallopel-Morvan K, Moodie C, Guignard R, et al. Consumer perceptions of cigarette design in France: a comparison of regular, slim, pink and plain cigarettes. *Nicotine Tob Res*. 2019;21(7):911–7. doi:10.1093/ntr/nty105
6. Moodie C. Warnings on every cigarette: extending health messaging to the consumption experience. *CMAJ*. 2018;190(43):E1271–2. doi:10.1503/cmaj.180781
7. Hassan LM, Shiu E. No place to hide: two pilot studies assessing the effectiveness of adding a health warning to the cigarette stick. *Tob Control*. 2015;24:e3–5. doi:10.1136/tobaccocontrol-2013-051238
8. Hoek J, Ferguson S, Court E, Gallopel-Morvan K. Qualitative exploration of young adult RYO smokers' practices. *Tob Control*. 2017;26(5):563–8. doi:10.1136/tobaccocontrol-2016-053168
9. Hoek J, Gendall P, Eckert C, Louviere J. Dissuasive cigarette sticks: the next step in standardised ('plain') packaging? *Tob Control*. 2016;25:699–705. doi:10.1136/tobaccocontrol-2015-052533
10. Hoek J, Gendall P, Gifford H, et al. Tobacco branding, plain packaging, pictorial warnings, and symbolic consumption. *Qual Health Res*. 2012;22(5):630–9. doi:10.1177/1049732311431070
11. Hoek J, Robertson C. How do young adult female smokers interpret dissuasive cigarette sticks?: a qualitative analysis. *J Soc Mark*. 2015;5(1):21–39. doi:10.1108/JSOCM-01-2014-0003
12. Hoek J, Wong C, Gendall P, et al. Effects of dissuasive packaging on young adult smokers. *Tob Control*. 2011;20:183–8. doi:10.1136/tc.2010.037861
13. Moodie CS, Hiscock R, Thrasher J, et al. Perceptions of cigarette pack inserts promoting cessation and dissuasive cigarettes among young adult smokers in the UK: a cross-sectional online survey. *BMJ Open*. 2018;8:e019662. doi:10.1136/bmjopen-2017-019662
14. Moodie C, Gendall P, Hoek J, et al. The response of young adult smokers and nonsmokers in the United Kingdom to dissuasive cigarettes: an online survey. *Nicotine Tob Res*. 2019;21(2):227–33.
15. Boyd TC, Boyd CJ, Greenlee TB. A means to an end: slim hopes and cigarette advertising. *Health Promot Pract*. 2003;4(3):266–77. doi:10.1177/1524839903004003011
16. Moodie C, Purves R, McKell J, et al. Novel means of using cigarette packaging and cigarettes to communicate health risk and cessation messages: a qualitative study. *Int J Ment Health Addict*. 2015;13:333–44. doi:10.1007/s11469-014-9530-1
17. Agaku IT, Vardavas CI, Ayo-Yusuf OA, et al. Gender and racial differences in smoking of long/ultra-long and king size cigarettes among U.S. adult smokers, NHANES 1999–2012. *Drug Alcohol Depend*. 2014;136:28–35. doi:10.1016/j.drugalcdep.2013.12.004
18. Moodie C, Ford A, Mackintosh A, Purves R. Are all cigarettes just the same? Females' perceptions of slim, coloured, aromatized and capsule cigarettes. *Health Educ Res*. 2015;30(1):1–12. doi:10.1093/her/cyu063
19. Borland R, Savvas S. Effects of stick design features on perceptions of characteristics of cigarettes. *Tob Control*. 2013;22:331–7. doi:10.1136/tobaccocontrol-2011-050199
20. O'Connor RJ, Bansal-Travers M, Cummings KM, et al. Filter presence and tipping paper color influence consumer perceptions of cigarettes. *BMC Public Health*. 2015;15:1279. doi:10.1186/s12889-015-2643-z
21. Health Canada. *New Health-Related Labelling for Tobacco Products*. Ottawa, Ontario: Health Canada; 2018.
22. Skaczkowski G, Durkin S, Kashima Y, Wakefield M. Influence of premium vs masked cigarette brand names on the experienced taste of a cigarette after tobacco plain packaging in Australia: an experimental study. *BMC Public Health*. 2018;18:295. doi:10.1186/s12889-018-5200-8
23. Truth Initiative. Marketing. Truth Initiative. [cited 2018 December 4]. Available from: <https://truthinitiative.org/topics/industry-and-influences/marketing>
24. Lim SS, Voss T, Flaxman AD, et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380:2224–60. doi:10.1016/S0140-6736(12)61766-8
25. Öberg M, Woodward A, Jaakkola MS, et al. Global estimate of the burden of disease from second-hand smoke. Geneva: WHO; 2010.
26. Drope J, Schluger N, Cahn Z, et al. *The Tobacco Atlas*. 6th edn. Atlanta: American Cancer Society and Vital Strategies; 2018.
27. World Health Organization. *WHO Report on the Global Tobacco Epidemic, 2013: Enforcing bans on tobacco advertising, promotion and sponsorship*. Luxembourg: World Health Organisation; 2013.
28. Mahabee-Gittens EM, Merianos AL, Matt GE. Preliminary evidence that high levels of nicotine on children's hands may contribute to overall tobacco smoke exposure. *Tob Control*. 2018;27(2):217–9.
29. Acuff L, Fristoe K, Hamblen J, et al. Third-hand smoke: old smoke, new concerns. *J Commun Healthc*. 2016;41(3):680–7. doi:10.1007/s10900-015-0114-1
30. Hendriksen E, Williams E, Sporn N, et al. Worried together: a qualitative study of shared anxiety in patients with metastatic non-small cell lung cancer and their family caregivers. *Support Care Cancer*. 2015;23(4):1035–41. doi:10.1007/s00520-014-2431-9
31. Bundhamcharoen K, Aungkulanon S, Makka N, Shibuya K. Economic burden from smoking-related diseases in Thailand. *Tob Control*. 2016;25(5):532–7. doi:10.1136/tobaccocontrol-2015-052319
32. Goodchild M, Nargis N, Tursan d'Espaignet E. Global economic cost of smoking-attributable diseases. *Tob Control*. 2018;27(1):58–64. doi:10.1136/tobaccocontrol-2016-053305
33. Ekpu VU, Brown AK. The economic impact of smoking and of reducing smoking prevalence: Review of evidence. *Tob Use Insights*. 2015;8:1–35.
34. Zafeiridou M, Hopkinson NS, Voulvoulis N. Cigarette smoking: an assessment of tobacco's global environmental footprint across its entire supply chain, and policy strategies to reduce it. Geneva: World Health Organization; 2018.
35. World Health Organization. *Tobacco and its impact: an overview*. Geneva: WHO; Year. [cited 2018 May 31]. Available from: <http://apps.who.int/iris/bitstream/handle/10665/255574/9789241512497-eng.pdf?sequence=1>
36. Houghton F, Houghton S, O'Doherty D, et al. 'Greenwashing' tobacco products through ecological and social/equity labelling: A potential threat to tobacco control. *Tob Prev Cessat*. 2018;4(November):37. doi:10.18332/tpc/99674
37. Houghton F, Houghton S, O'Doherty D, et al. Greenwashing tobacco—attempts to eco-label a killer product. *J Environ Stud Sci*. 2019;9:82. doi:10.1007/s13412-018-0528-z
38. New Zealand Ministry of Health. *Current smokers (has smoked more than 100 cigarettes in lifetime and currently smokes at least once a month)*. Wellington: Ministry of Health. [cited 2019 September 13]. Available from: <https://www.health.govt.nz/publication/annual-update-key-results-2017-18-new-zealand-health-survey>

39. Health Promotion Agency Te Hiringa Hauora. Smoke Free Facts and Figures. Wellington: Health Promotion Agency Te Hiringa Hauora; 2019. [cited 2018 December 4]. Available from: <https://www.smokefree.org.nz/smoking-its-effects/facts-figures>
40. Glover M, Kira A, Cowie N, et al. Health consequences of tobacco use for Maori - cessation essential for reducing inequalities in health. *N Z Med J.* 2013;126(1379):60–73.
41. Dickerson F, Schroeder J, Katsafanas E, et al. Cigarette smoking by patients with serious mental illness, 1999–2016: An increasing disparity. *Psychiatr Serv.* 2018;69(2):147–53. doi:10.1176/appi.ps.201700118
42. Ball J, Stanley J, Wilson N, et al. Smoking prevalence in New Zealand from 1996–2015: a critical review of national data sources to inform progress toward the Smokefree 2025 goal. *N Z Med J.* 2016;129(1439):11–22.
43. Hay DR, Foster FH. The influence of race, religion, occupation and other social factors on cigarette smoking in New Zealand. *Int J Epidemiol.* 1981;10(1):41–3. doi:10.1093/ije/10.1.41
44. Hill S, Blakely T, Howden-Chapman P, et al. Smoking inequalities: Policies and patterns of tobacco use in New Zealand, 1981–1996. *Public Health Monogr.* 2003;2(11).
45. Smokefree. [cited 2018 December 4]. Available from: <https://www.smokefree.org.nz/smoking-its-effects/facts-figures>
46. Smith KC, Washington C, Welding K, et al. Cigarette stick as valuable communicative real estate: a content analysis of cigarettes from 14 low-income and middle-income countries. *Tob Control.* 2017;26(5):604–7. doi:10.1136/tobaccocontrol-2016-053148
47. Hammond D. Health warning messages on tobacco products: a review. *Tob Control.* 2011;20:327–37. doi:10.1136/tc.2010.037630
48. Noar SM, Hall MG, Francis DB, et al. Pictorial cigarette pack warnings: a meta-analysis of experimental studies. *Tob Control.* 2016;25:341–54. doi:10.1136/tobaccocontrol-2014-051978
49. Houghton F, Houghton S, O'Doherty D, et al. The tobacco endgame: The importance of targets and geography. *Can J Public Health.* 2018;109(5–6):900–1. doi:10.17269/s41997-018-0150-6