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Children's positive attitudes towards the tobacco industry is associated with initiation of smoking

Anette Kira, Marewa Glover, Dudley Gentles, Judith McCool, Robert Scragg, Chris Bullen, Vili Nosa

Seventeen percent of New Zealand ever-smoking children smoked their first cigarette before 10 years old (Māori 26%, Pacific Island 20%, European 10%).¹ Eighteen percent of Māori and 11% of Pacific Island 14–15 year olds are regular smokers children (vs 6% for European youth).²

Cross-sectional research has found that teenagers who hold tolerant attitudes, for example that the tobacco industry is truthful and does not target young people, are more susceptible to smoking uptake than those who consider the tobacco industry to be manipulative or who agree that the tobacco industry targets adolescents.^{3–5} New Zealand cross-sectional research with 14–15 year olds found a significant association between tolerant attitudes of tobacco industry trustworthiness, the tobacco industry's rights and the tobacco industry's responsibility for youth smoking uptake and susceptibility (absence of a definite commitment not to smoke) and having ever smoked (initiation).⁵

We were interested to see if tolerant attitudes towards the tobacco industry was associated with smoking initiation for 10–13 year old pre-adolescents from predominantly Māori and Pacific Islander populations.

Methods

Students from year 7 (10–11 years old) and 8 (11–12 years old) from the control groups of the Keeping Kids Smokefree (KKS) study participated. Ever-smoking students (answered “yes” to the question, “Have you ever smoked a cigarette, even just a few puffs”) at baseline and students

who had less than one follow-up measure were excluded.

Students were surveyed at baseline and when they reached year 9 (12–13 years old). Ever-smoking was measured both times. Demographic variables and susceptibility to smoking initiation (without a definite commitment not to smoke), was collected at baseline. The students were asked if they “agree, disagree or don't know” to nine statements relating to attitudes towards smoking and the tobacco industry.

Data were analysed using SAS v 9.2 (SAS Institute., Cary, NC, US) with all tests being two-sided; $p < 0.05$ deemed statistically significant. We produced logistic regression models with outcome smoking initiation (represented by ever-smoking) at follow-up. Smoking at follow-up (Table 1) was adjusted by attitude, age, gender, ethnicity (Māori, Pacific, European, Indian and Asian) and parental smoking at home, friends smoking at home and time to follow-up (1 or 2 years). Ethics approval was obtained from the University of Auckland Human Participants Ethics Committee (Ref. 2006/416).

Results

The overall response rate for KKS was 83% (4,688 of 5,648 students approached at baseline participated). Analysis was restricted to the 1,505 children at baseline who completed all the relevant questions and had a follow-up measurement. Most were 10 and 11 years old (91%); 60% were Māori and Pacific. At the end of two years follow-up, 134 students (9%) had tried smoking for the first time. Table 1 shows the

Table 1: Demographics at baseline according to whether they subsequently smoked during follow-up (n=1,505)

	Smoked counts N=134 (row%)	Did not smoke counts N=1,371 (row%)
Age at baseline		
10–11	122 (8.5%)	1,311 (91.5%)
12–13	12 (16.7%)	60 (83.3%)
Gender		
Boys	61 (8.5%)	659 (91.5%)
Girls	73 (9.3%)	712 (90.7%)
Ethnicity		
Māori	41 (16.4%)	209 (83.6%)
Pacific	70 (10.8%)	576 (89.2%)
European	4 (4.7%)	81 (95.3%)
Indian	16 (4.1%)	378 (95.9%)
Asian	3 (2.3%)	127 (97.7%)
Susceptible		
Yes	38 (21.1%)	142 (78.9%)
No	96 (7.2%)	1,229 (92.8%)
Parental smoking at home		
Yes	46 (14.4%)	273 (85.6%)
No	88 (7.4%)	1,098 (92.6%)
Friends smoking at home		
Yes	6 (17.1%)	29 (82.9%)
No	128 (8.7%)	1342 (91.3%)

odds ratios of children's attitudes toward smoking and subsequent smoking initiation at follow-up, with all models adjusted for age, gender, ethnicity parental smoking in the home, friends smoking at home and time to follow-up. The attitudes "I would believe it if a tobacco company said they had made a safer cigarette", and "Tobacco companies should have the same right to sell cigarettes as other companies have to sell their products", was associated with initiation of smoking (Table 2).

Discussion

In this first longitudinal study of children's attitudes towards the tobacco industry and subsequent smoking uptake,

two attitudes were found to predict smoking initiation, both sympathetic to the tobacco industry. McCool et al⁵ found a significant association between susceptibility to smoking initiation and attitudes towards whether the tobacco industry is trying to get young people to start smoking and the trustworthiness of the industry. However, the current study found that only attitudes relating to trustworthiness of the industry were associated with smoking initiation.

Tobacco industry denormalisation campaigns have been found to reduce smoking prevalence among youth, reduce smoking initiation, and reduce perceived peer smoking prevalence,⁶ but there has been little focus on this in

Table 2: Children's attitudes toward smoking and the Tobacco Industry at baseline and subsequent smoking initiation at follow-up—showing multivariate† odds ratios and 2 x 2 tables with counts (row %).

	Response	Ever-smoker	Never-smoker	OR	95% CI
Do you think cigarette smoking could make you unwell?	Yes No	124 (9%) 10 (10%)	1,281 (91%) 90 (90%)	1.1 1.0	0.53–2.17
Pregnant women shouldn't smoke.	Agree Disagree	122 (9%) 12 (9%)	1,245 (91%) 126 (91%)	0.9 1.0	0.49–1.79
People under the age of 16 should not smoke.	Agree Disagree	129 (9%) 5 (6%)	1,288 (91%) 83 (94%)	0.6 1.0	0.24–1.58
My parents or caregivers would be upset if they knew I smoked.	Agree Disagree	130 (9%) 4 (12%)	1,342 (91%) 29 (88%)	1.4 1.0	0.47–4.40
Tobacco companies are responsible for people starting to smoke.	Agree Disagree	97 (8%) 37 (11%)	1,078 (92%) 293 (89%)	1.4 1.0	0.89–2.06
Tobacco companies try to get young people to start smoking.	Agree Disagree	95 (8%) 39 (10%)	1,021 (92%) 350 (90%)	1.1 1.0	0.73–1.67
I would believe it if a tobacco company said they had made a safer cigarette.	Agree Disagree	30 (15%) 104 (8%)	164 (85%) 1,207 (92%)	2.2 1.0	1.39–3.53*
Tobacco companies should have the same right to sell cigarettes as other companies have to sell their products.	Agree Disagree	27 (13%) 107 (8%)	173 (87%) 1,198 (92%)	1.6 1.0	1.01–2.65*

*p<0.05

New Zealand campaigns. The predominant focus recently in New Zealand has been on promoting quitting by annually increasing tobacco excise tax and extending smokefree environments. Since July, 2012, tobacco products were no longer allowed to be displayed at point of sale. In February, 2013, the Government announced it would bring in standardised packaging, following Australia's lead (though this hasn't happened yet). In response to the announcement, the tobacco industry ran several campaigns to bolster sympathy towards them. To

protect children from being influenced by tobacco industry communications it may necessary to run tobacco industry denormalisation campaigns that raise awareness of deceitful behaviours and build critical media-use skills.

A strength of this study is the use of a longitudinal design, enabling analysis that shows susceptibility and certain attitudes both preceded smoking initiation. A limitation was that students were predominantly Māori and Pacific Island, limiting generalisability to non-Māori and non-Pacific pre-adolescents.

Competing interests: Nil

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