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## RESEARCH PAPER

# Stereotyping the smoker: adolescents' appraisals of smokers in film

J P McCool, L Cameron, K Petrie

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**Objective:** To assess the relation between demographic factors and film smoking stereotypes in adolescents and the potential influence of smoker stereotypes on smoking susceptibility.

**Design:** A cross sectional questionnaire survey of school students ( $n = 3041$ ) aged 12–13 and 16–17 years who were asked to describe the personal characteristics of female and male smokers in films.

**Setting:** 15 primary or intermediate schools and 10 secondary schools in Auckland, New Zealand.

**Results:** Appraisals of smokers in film were strongly influenced by age and sex with younger adolescents and males more likely to see female smokers as sexy, intelligent and healthy whereas older students and females more often appraised female smokers as stressed bored and depressed. Overall, image stereotypes (sexy, stylish) were more likely to be significantly associated with smoking susceptibility than emotional sensitivity stereotypes (stressed, depressed etc).

**Conclusions:** Adolescents differ significantly in their appraisal of smokers in films; however, image based stereotypes, rather than emotional sensitivity stereotypes, are significantly associated with smoking susceptibility.

Adolescent smoking is a persistent public health issue. The epidemiology of smoking among adolescents has identified multiple and interrelated factors which may predict future tobacco use. Recently, attention has shifted towards assessing the impact of smoking imagery in popular media as an important factor in establishing or maintaining pro-smoking beliefs and intentions. Research on the impact of smoking imagery in film on adolescent smoking behaviour has identified several important associations: preference for a smoking film star is associated with favourable attitudes towards smoking<sup>1</sup>; frequency of viewing smoking imagery in film is strongly and directly associated with trying cigarettes<sup>2</sup>; and extent of film viewing is associated with increased smoking initiation among adolescents.<sup>3</sup> These studies have attracted considerable attention, specifically to the potential role of film as a powerful medium in disseminating positive images of smokers. However, further research is needed to tease out how different sociodemographic groups appraise dominant images of tobacco use and what types of smoker traits are associated with susceptibility to smoking in the future.

In previous qualitative studies we identified that adolescents predominantly perceived that smoking in film is normal and expected, and it is an accurate representation of real life.<sup>4,5</sup> These studies identified that images of tobacco use were perceived to be credible and salient if they referenced a familiar or desired image or emotional state or social context. In other words, appraisals of smoking imagery in film reflected the viewer's experiences and expectations of the image and behavioural characteristics associated with smoking, within the cinematic and everyday context. These findings support other research within the film industry, which identified that the act of smoking on-screen has been valued by filmmakers for its ability to communicate a range of moods, characteristics, and context.<sup>6</sup> In effect, young viewers appreciate the accessible (familiar) image of the stressed or sexy smoker as symbolic clues to the authenticity of an image; the actor's social status, lifestyle, subcultural affiliation, and emotional state.

Differential effects research, which attempts to identify sociodemographic differences in interpretation of media images, has been advocated as an important direction for media research.<sup>7</sup> This approach logically extends the rationale for addressing sociodemographic differences in smoking behaviour into the interpretive domain of media effects, before assessing the relation between different stereotype images and smoking susceptibility. Despite expectations that adolescents are sensitive to the nuances of smoking portrayals in film, previous studies have not clearly distinguished social group differences in appraisals of dominant smoker images in film. We appreciate that the trajectory to smoking differs according to sociodemographic factors. Specifically, boys tend to smoke earlier and have higher consumption of tobacco, whereas girls have a higher prevalence of smoking; the onset of smoking starts in early adolescence, but is established through the later adolescent years; and important differences exist between ethnic groups in smoking behaviours.<sup>8,9</sup> Demographic characteristics such as sex, age level, smoking status, and ethnicity thus may be important to decoding images of smoking in film and they may provide important clues as to which groups may be more vulnerable to specific images, and how best to manage this issue.

Previous qualitative research identified the potential for appraisals of smoking images in film to vary by age.<sup>4,5</sup> Older teens were noted to be particularly attentive to the emotional status of smokers in film, particularly in terms of negative emotional states. Specifically, they were more likely than younger adolescents to empathise with, and acknowledge the relaxant effect of, smoking during emotionally distressing situations. Other studies of smoking among young people found that smoking initiation and maintenance is associated with stress and depression.<sup>10</sup> Even during adolescence, the perceived therapeutic qualities of nicotine appear to be readily understood and smoking is widely accepted as an important and appropriate coping strategy to manage stress during periods of transition. Moreover, as adolescents grow older they mature in their sensitivity to emotional experiences of others.<sup>11</sup> Accordingly, older adolescents may be more

attentive to smokers who display an emotionally based rationale for smoking.

The qualitative findings further suggest that younger adolescents, who may have had less direct experience with smoking, attend to the more stereotypical (or objectified) image specific characteristics of the smokers, such as the sexy woman or tough cop.<sup>4-5</sup> Previous studies have found that older teenagers are more likely than younger adolescents to be smokers, socialise with smokers, and/or be affiliated with subcultural groups in which smoking is a normative behaviour.<sup>12-14</sup> It is therefore likely that older age is associated with less identification of image stereotypes of smokers in films, as there is greater heterogeneity in the kinds of people who smoke in the social worlds of older youths.

Sensitivity to media stereotypes of smokers is also likely to vary by sex. Smoking is associated with weight control, self image, self esteem, and risk taking, all of which are sex related predictors of smoking uptake among young people.<sup>12-13</sup> Media images portraying related qualities (for example, sexy, healthy, stressed) may therefore be differentially attractive to boys and girls. There are also well established sex differences in sensitivity to emotional cues, with females exhibiting greater sensitivity to the emotional expressions and experiences of others (particularly negative emotions).<sup>11-13-14</sup> Sex intensification emerges during adolescence, whereby adolescents' start to conceptualise themselves in terms of masculine and feminine traits.<sup>11</sup> Adolescent girls therefore may be more likely than boys to identify the emotional stereotypes of smokers in film, given that on-screen smokers are often portrayed as stressed, anxious, or angry.<sup>4-5</sup>

Disparities between ethnic groups smoking rates highlight the importance of exploring ethnic group differences in appraisals of media images of smokers. Maori, the indigenous population of New Zealand, consistently report higher rates of smoking among young people and adults and, consequently, exhibit significantly higher morbidity and mortality rates compared to all other ethnic populations in New Zealand.<sup>15</sup> Pacific Island adolescents are also reporting similarly higher rates of tobacco use, although not as high as Maori and European. Cultural norms and expectations of smoking behaviour play an important role in registering and maintaining higher levels of tobacco use in some populations.<sup>15-16</sup> It is therefore important to explore whether Maori or Pacific Island young people identify with specific types of smoker stereotypes in films. This information can provide some insights as to whether certain expectations about social images and emotional effects of smoking may be particularly potent for these groups. These expectations may reflect contributing factors to the perpetuation of high smoking rates in these ethnic groups.

Previous studies of smoking imagery in film have assessed adolescents' susceptibility to smoking as a predictor of subsequent tobacco use.<sup>1-2</sup> Prospective studies have identified that adolescents who are never smokers, but who report susceptibility (that is, report that they intend to smoke or hold pro-smoking attitudes) are more likely to smoke in the future.<sup>17</sup> Studies have found that smoking susceptibility (an expectation of being a smoker in the future) reflects a pro-smoking attitude and a cognitive intention to smoke in the future, and is a highly significant predictor of future smoking.<sup>3-17-18</sup> Young people who are more susceptible to smoking may have greater sensitivity to positive image focused stereotypes such as "sexy" and "stylish".

This paper assesses group differences in adolescents' appraisals of smoking stereotypes in film from a survey of 3041 adolescents (aged 12 and 16 years). In this context, the term "stereotype" refers to an accessible, recognisable personal quality commonly associated with a character type.

The questionnaire was designed to assess a range of theoretical constructs derived from earlier qualitative research.<sup>4-5</sup> Specifically, in this paper we report on the effects of age level, sex, smoking susceptibility, and ethnicity on young people's appraisals of emotional stereotypes and image stereotypes of smokers in film.

The aims of this study were to assess the relations between young people's perceptions of smoker emotional sensitivity stereotypes and image stereotypes and age level, sex, and ethnic groups and to assess the relation between emotional stereotypes and image stereotypes on smoking susceptibility.

## METHODS

### Setting

A detailed description of the study design, sample, and procedures is published elsewhere.<sup>16</sup> A random sampling strategy was used to generate two representative samples of year 8 (mean age 12 years) and year 12 (mean age 16 years) students from school in Auckland, New Zealand. In total, 10 secondary schools (76%) and 15 primary or intermediate schools (68%) participated in the study.

### Participants

In total, 3041 students completed the media interpretation questionnaire, which constituted a 91% response rate. Nine per cent ( $n = 301$ ) of the 3342 questionnaires distributed were not entered because they were either incomplete (fewer than half of the items completed), implausible answers were given (that is, response given was outside the range of Likert-type options, or unrelated to question), or students declined to participate by not completing any item in the questionnaire. No data were gathered on participants who did not complete the questionnaire. The mean decile rank for the total sample was 5.4 (median 5.0, SD 2.8). The sampling strategy successfully yielded a sample (table 1) that was representative of the demographic profile of the greater Auckland region (New Zealand Census, 2001). In the majority of cases, students opted to identify with one ethnic group (92%,  $n = 2793$ ), with the remainder reporting identification with two (7%,  $n = 215$ ) or more (0.4%,  $n = 11$ ) ethnic groups. Data analyses were run excluding students who identified with more than one ethnic group, but this did not alter the pattern or significance of results.

### Procedure

Liaison with the school principal and teachers was initiated before the commencement of the survey to develop an appropriate strategy for the administration of the questionnaires. A passive consent procedure was adopted to allow parents to provide input on the study while preserving the representativeness of the sample and integrity of the study. All students were granted consent to participate in the survey. The majority of year 12 students were 16 years or

**Table 1** Sample demographic characteristics

	Year 8	Year 12
School year	48.1% ( $n = 1464$ )	51.8% ( $n = 1576$ )
Age	Median 12 years	Median 16 years
Sex*	Male 52.7% ( $n = 772$ ) Female 47% ( $n = 688$ )	Male 57.6% ( $n = 908$ ) Female 42.1% ( $n = 663$ )
Ethnic group†		
European	55.5% ( $n = 813$ )	53.9% ( $n = 849$ )
Maori	12.9% ( $n = 189$ )	10.2% ( $n = 161$ )
Pacific Island	13.5% ( $n = 198$ )	19.5% ( $n = 308$ )
Asian	17% ( $n = 249$ )	19.3% ( $n = 304$ )
Other	5.7% ( $n = 84$ )	6.0% ( $n = 94$ )

\*11 missing values.

†226 participants reported belonging to more than one ethnic group.

older at the time of surveying and were able to participate without seeking parental consent (passive consent).

### Data analyses

Data analysis was performed using the software programme SPSS version 10. Correlation analysis was conducted to assess the strength of correlation between the individual traits. Kendall's tau was used to provide information on the strength and direction of the correlation.<sup>19</sup> Demographic differences in high (versus low) film exposure were assessed, with film exposure entered as the dependant measure and demographic variables entered as independent variables. Separate logistic regressions were computed for each individual stereotype. The stereotypes were entered individually as the dependent variable; the independent variables described below were then entered into the equation. Further analyses were conducted to assess the effect of smoker stereotypes on smoking susceptibility. Smoking susceptibility was entered as the dependant measure and smoker stereotypes entered as the independent measures. Demographic variables were also entered as covariates. Throughout the study a significance level of  $p < 0.01$  was assumed. Analyses of differences by ethnic group were conducted with European as the reference for the calculation of odds ratio statistics.

### Measures

Smoking susceptibility was assessed using the following items, "How likely is it that you will try a cigarette in the next year" (five point scale from 1 = "Yes, definitely", to 5 = "Definitely not") and "How likely is it that you will be a smoker in the future" (five point scale from 1 = "Yes, definitely" to 5 = "Definitely not"). All non-smokers who responded with "Probably" or "Yes, definitely", for both questions were categorised as susceptible smokers. Internal consistency for these constructs was considered sufficient ( $\alpha = 0.73$ ).

Male and female smoker stereotypes were assessed by presenting a range of pervasive actor characteristics for which a dichotomous (1 = Yes or 2 = No) response option was presented. The questions were stated as "In general, do you think that female smokers in films tend to be: stylish, tough, depressed, smart, bored, sexy, hard, stressed, healthy, weak, angry, intelligent". The same question was repeated for male smokers. Principal components analysis identified two constructs which were then described as "emotional sensitivity" and "image" stereotypes. Items were assessed individually, but are presented according to emotional sensitivity characteristics (for example stressed, bored, angry, depressed) and image characteristics (for example, sexy, stylish, intelligent, healthy).

## RESULTS

### Correlation analyses for smoker stereotypes

Moderate associations were identified between emotional stereotypes of stressed, bored, angry, and depressed. For female smoker stereotype items, these coefficients ranged from 0.25–0.44; for male smoker stereotype items, these coefficients ranged from 0.28–0.45. Similarly, there were moderate associations among the image stereotype item of sexy, stylish, intelligent, and healthy for both female smoker stereotypes (ranging from 0.18–0.41) and male smoker stereotypes (ranging from 0.21–0.40). As expected, there was also moderate correlation identified between male and female options of each stereotype (for example, male stressed and female stressed;  $r = 0.37$ ). Alongside the expected correlations identified within the two stereotype groups (emotional sensitivity and image stereotypes), very weak correlations were identified between these groups. The

**Table 2** Summary of logistic regression analyses for frequent film exposure (cinema)

	%	OR	95% CI	p Value
Year 8	48	0.44	0.37 to 0.52	0.000
Female	44	1.1	1.0 to 1.3	0.042
Susceptible	27	1.3	1.1 to 1.6	0.001
Maori	12	0.92	0.72 to 1.1	0.502
Pacific	17	0.89	0.72 to 1.1	0.304
Asian	18	1.4	1.1 to 1.7	0.002

Ethnic reference group = European; n = 2815.  
CI, confidence interval; OR, odds ratio.

absence of multicollinearity suggests the groups are conceptually distinguished.

### Frequency of film viewing

Although overall proportions of students who reported high film viewing, at the cinema and on video (at home and at friends) were low, analysis revealed several significant differences in perceived frequency of viewing film (table 2). Specifically, younger teens were more likely than older adolescents to report watching film at the cinema frequently (40.3% (588) v 24.2% (382)). Susceptible non-smokers were also more likely to report watching films at the cinema frequently (34.5% (286) v 31.3% (672)). Asian students were less likely to be high film viewers compared to European students (24.1% (133) v 33.7% (830)).

### Female smoker stereotypes

#### Age level

A summary of the logistic regression analysis for female smoker stereotypes is presented in table 3. Consistent with expectations, differences by age level were observed across the emotional sensitivity and image female smoker stereotypes. Specifically, younger adolescent students were less likely than older students to report that female smokers were healthy (13.3% (191) v 10.1% (158)). No significant differences were observed for sexy, stylish, or intelligent. However, within the emotional sensitivity stereotypes, older adolescents were more likely than younger adolescents to report female smokers in film were often stressed (68.4% (942) v 76.5% (910)), whereas younger adolescents were more likely to perceive female smokers in film to angry (65.7% (942) v 58.1% (910)).

#### Sex

Sex differences were observed across both the emotional sensitivity stereotypes and image stereotypes. Specifically, differences in appraisals of image of the image stereotypes revealed that males were more likely than females to report that female characters who smoke are sexy (45.3% (751) v 34.6% (462)), intelligent (20.2% (334) v 13.9% (186)), and healthy (13.5% (191) v 9.3% (158)). Within the emotional sensitivity stereotypes, females were more likely than males to appraise female smokers in film as stressed (79.1% (1058) v 67.4% (1118)), bored (51.3% (686) v 46.7% (770)), angry (67.1% (898) v 57.5% (951)), and depressed (71.2% (954) v 61.0% (1011)).

#### Ethnicity

Ethnic group differences in appraisal of image stereotypes for female smokers in film were also observed, with Pacific students more likely than European students to report that female film stars to be sexy (47.1% (232) v 39.3% (980)), stylish (52.1% (259) v 41% (1024)) and intelligent (22% (108) v 16.5% (411)). No other significant differences were identified across the emotional sensitivity stereotypes.

**Table 3** Summary of logistic regression analyses for female smoker stereotypes

	Female smoker stereotypes			
	%	OR	95% CI	p Value
<b>Sexy</b>				
Year 8	40.5 (40.5)	0.95	0.82 to 1.1	0.509
Female	34.6 (45.3)	0.63	0.54 to 0.73	0.000
Maori	36.4 (41.2)	1.1	0.92 to 1.4	0.183
Pacific	47.1 (39.3)	0.71	0.58 to 0.87	0.001
Asian	39.7 (40.8)	0.99	0.58 to 0.87	0.951
<b>Stylish</b>				
Year 8	41.4 (44.2)	0.1.0	0.92 to 1.2	0.330
Female	40.5 (44.6)	0.84	0.72 to 0.97	0.021
Maori	40.9 (43.9)	1.0	0.83 to 1.3	0.624
Pacific	52.1 (41.0)	0.64	0.52 to 0.78	0.000
Asian	42.3 (43.0)	0.95	0.78 to 1.1	0.662
<b>Intelligent</b>				
Year 8	17.7 (17.1)	0.89	0.74 to 1.0	0.273
Female	13.9 (20.2)	0.62	0.51 to 0.76	0.000
Maori	18.8 (17.3)	0.87	0.64 to 1.1	0.373
Pacific	22.0 (16.5)	0.66	0.51 to 0.84	0.001
Asian	17.3 (17.5)	0.90	0.70 to 1.1	0.452
<b>Healthy</b>				
Year 8	13.4 (10.1)	0.71	0.57 to 0.90	0.004
Female	9.3 (13.5)	0.64	0.50 to 0.81	0.000
Maori	14.5 (11.3)	0.78	0.56 to 1.0	0.146
Pacific	10.8 (11.8)	1.0	0.77 to 1.4	0.678
Asian	9.9 (12.0)	1.1	0.86 to 1.6	0.309
<b>Stressed</b>				
Year 8	68.4 (76.5)	1.5	1.3 to 1.8	0.000
Female	79.1 (67.4)	1.8	1.6 to 2.2	0.000
Maori	74.7 (72.4)	0.93	0.71 to 1.2	0.601
Pacific	73.4 (72.5)	1.0	0.83 to 1.3	0.677
Asian	69.3 (73.4)	1.2	1.0 to 1.5	0.024
<b>Bored</b>				
Year 8	46.8 (50.4)	1.1	1.0 to 1.3	0.062
Female	51.3 (46.7)	1.2	1.0 to 1.4	0.007
Maori	50.9 (48.4)	0.88	0.70 to 1.1	0.297
Pacific	53.7 (47.7)	0.78	0.64 to .95	0.014
Asian	48.2 (48.6)	0.93	0.77 to 1.1	0.481
<b>Angry</b>				
Year 8	65.7 (58.1)	0.73	0.62 to 0.85	0.000
Female	67.1 (57.5)	1.4	1.2 to 1.7	0.000
Maori	68.4 (61.0)	0.75	0.59 to 0.96	0.027
Pacific	64.4 (61.4)	0.86	0.70 to 1.0	0.158
Asian	59.0 (62.5)	1.0	0.90 to 1.3	0.349
<b>Depressed</b>				
Year 8	63.7 (67.2)	1.2	1.0 to 1.4	0.015
Female	71.2 (61.0)	1.6	1.3 to 1.8	0.000
Maori	66.2 (65.5)	1.0	0.78 to 1.2	0.984
Pacific	66.3 (65.4)	0.99	0.80 to 1.2	0.990
Asian	64.3 (65.9)	1.0	0.89 to 1.3	0.358

Ethnic reference group = European; n = 2815; missing cases range 126–141.

### Male smoker stereotypes

#### Age level

A summary of the logistic regression statistics for male smoker stereotypes are presented in table 4. Differences between the age levels were noted across only two male stereotypes. Specifically, within the emotional sensitivity stereotypes, younger students were more likely than older students to appraise male smokers in film as angry (69.1% (985) v 61.8% (966)) and depressed (52.9% (755) v 48.2% (754)).

#### Sex

Differences between male and female students were observed across the image stereotypes, with females more likely to report male film stars who smoke as sexy (36.5% (485) v 22.5% (370)) whereas males reported higher scores for stylish (47.9% (792) v 41.6% (555)), intelligent (26% (429) v 17% (226)), and healthy (17.1% (282) v 10.1% (134)). However, females were more likely to report that male characters who smoke were stressed (67.1% (893) v 57.1% (942)), bored (49% (633) v 42.3% (699)), angry (69.2% (922) v 62.2% (1029)), and depressed (55.7% (743) v 46.1% (762)).

#### Ethnic group

Differences between ethnic group appraisals of male smokers in film were also observed, with Pacific students more likely to report male smokers to be sexy (36.0% (177) v 27.3% (675)), stylish (57.4% (284) v 42.6% (1058)), and intelligent (28.5% (140) v 20.7% (513)). Pacific students also were more likely to appraise the emotional sensitivity stereotypes: bored (53.2% (260) v 43.8% (1088)) and depressed (57.4% (283) v 49.1% (1218)). Asian students also rated male smokers as typically stylish (50.2% (260) v 43.8% (1088)) and intelligent (25.2% (138) v 21.3% (515)) compared to other ethnic groups.

#### Smoking susceptibility

Further analyses were conducted to assess the relation between image and emotional sensitivity stereotypes and smoking susceptibility (table 5). Results indicate that across both female and male stereotypes, sexy and stylish stereotypes were found to be significantly associated with smoking susceptibility ( $p$ 's < 0.01). No emotional sensitivity stereotypes were found to be associated with smoking susceptibility.

**Table 4** Summary of logistical regression for male smoker stereotypes

	%	Smoker OR	Stereotypes 95% CI	Male p value
<b>Sexy</b>				
Year 8	30.3 (27.4)	0.86	0.73 to 1.0	0.091
Female	36.4 (22.5)	1.9	1.6 to 2.3	0.000
Maori	28.0 (28.8)	1.0	0.83 to 1.3	0.557
Pacific	36.0 (27.3)	0.66	0.53 to 0.82	0.000
Asian	27.9 (29.0)	1.0	0.81 to 1.2	0.957
<b>Stylish</b>				
Year 8	43.2 (46.8)	1.0	0.93 to 1.2	0.273
Female	41.6 (47.9)	0.76	0.65 to 0.88	0.000
Maori	44.6 (45.1)	0.88	0.65 to 1.1	0.289
Pacific	57.4 (42.6)	0.51	0.42 to 0.63	0.000
Asian	50.2 (43.9)	0.67	0.56 to 0.82	0.000
<b>Intelligent</b>				
Year 8	21.6 (22.4)	0.97	0.81 to 1.1	0.792
Female	17.0 (26.0)	0.56	0.47 to 0.68	0.000
Maori	23.2 (21.9)	0.80	0.61 to 1.0	0.122
Pacific	28.5 (20.7)	0.60	0.48 to 0.76	0.000
Asian	25.2 (21.3)	0.69	0.55 to 0.87	0.002
<b>Healthy</b>				
Year 8	15.0 (13.2)	0.81	0.65 to 1.0	0.051
Female	10.1 (17.1)	0.53	0.42 to 0.66	0.000
Maori	15.9 (13.9)	0.79	0.58 to 1.0	0.166
Pacific	16.7 (13.6)	0.76	0.58 to 1.0	0.056
Asian	13.5 (14.2)	0.95	0.72 to 1.2	0.769
<b>Stressed</b>				
Year 8	61.8 (61.4)	0.99	0.85 to 2.2	0.961
Female	67.1 (57.1)	1.5	1.2 to 1.7	0.000
Maori	62.6 (61.5)	0.97	0.77 to 1.2	0.862
Pacific	62.8 (61.3)	0.93	0.76 to 1.1	0.527
Asian	62.2 (61.5)	0.96	0.79 to 1.1	0.741
<b>Bored</b>				
Year 8	44.6 (46.0)	1.0	0.90 to 1.2	0.553
Female	49.0 (42.3)	1.3	1.1 to 1.5	0.000
Maori	47.1 (45.1)	0.90	0.72 to 1.1	0.404
Pacific	53.2 (43.0)	0.67	0.55 to 0.82	0.000
Asian	46.0 (45.0)	0.90	0.74 to 1.0	0.284
<b>Angry</b>				
Year 8	69.1 (61.8)	0.72	0.62 to 0.84	0.000
Female	69.2 (62.2)	1.3	1.1 to 1.5	0.000
Maori	65.4 (65.5)	0.99	0.77 to 1.2	0.943
Pacific	69.4 (64.0)	0.75	0.61 to 0.94	0.012
Asian	66.3 (65.0)	0.91	0.74 to 1.1	0.359
<b>Depressed</b>				
Year 8	52.9 (48.2)	0.82	0.70 to 0.94	0.008
Female	55.7 (46.1)	1.4	1.2 to 1.6	0.000
Maori	48.8 (50.7)	1.0	0.84 to 1.3	0.577
Pacific	57.4 (49.0)	0.69	0.57 to 0.85	0.000
Asian	51.5 (50.2)	0.90	0.74 to 1.1	0.325

Ethnic reference group = European; n = 2815; missing cases range 126–141.

## DISCUSSION

Results from these analyses indicate significant variability between social groups in their interpretation of smoker stereotypes in film. As anticipated, differences in appraisals of smokers in film were patterned by age level, sex, and smoking susceptibility and to a lesser extent by ethnicity. Both female and male image stereotypes in film were also positively associated with smoking susceptibility, while no significant effect was found for emotional sensitivity stereotypes on smoking susceptibility. Results of the analysis of smoker stereotypes on smoking susceptibility suggest that although adolescents observe the range of smoker stereotypes presented in film, the most persuasive images are those which concentrate on the physical image of the star.

Some limitations of the study are important to note. This research is based on a cross sectional sample of New Zealand adolescents; therefore, results from this study may not be generalisable to other populations, nor can we predict the direction of relations between variables. The stereotypes measures presented included a restricted range of stereotypes which may not reflect the language preferences of the sample population. However, the character stereotypes were derived

from the earlier qualitative research and were translated into the questionnaire format within a relative short time period. In addition, the stereotypes assessed were not images, but a list of stereotypical characteristics; accordingly, different results may have emerged if we had shown the participants film clips of smokers. We only assessed students in two age groups (12 years and 16 years) and therefore it is likely that a different pattern of effect may have emerged if we studied students within the mid adolescence (14 years), or children (under aged 12 years). The smoking susceptibility scale was developed from a general psychological measure of behavioural intention, rather than a standard measure as described by Pierce *et al.*<sup>17</sup> Finally, we did not collect data on the non-responders and therefore cannot speculate whether this group was demographically distinct from the sample obtained.

Consistent with expectations, younger adolescents were more likely to appraise smokers in terms of their image (for example, sexy, stylish, intelligent, and healthy), whereas older teens were more likely to report empathetic interpretations (for example, stressed, depressed, bored). Sex differences were evidenced in the greater propensity for females to

**Table 5** Summary logistic regression analysis for smoker stereotypes on smoking susceptibility (controlling for age, sex, ethnic group)

	%	OR	95% CI	p Value
<b>Female</b>				
Year 8	17.3 (36.8)	3.1	2.5 to 3.7	0.000
Female	24.9 (29.3)	0.99	0.83 to 1.1	0.967
Maori	34.3 (26.5)	0.71	0.54 to 0.92	0.011
Pacific	26.3 (27.6)	1.6	1.3 to 2.1	0.000
Asian	12.1 (30.8)	3.8	2.8 to 5.1	0.000
Sexy	50.5 (36.0)	1.4	1.1 to 1.7	0.001
Stylish	53.2 (38.0)	1.4	1.2 to 1.8	0.000
Healthy	16.2 (9.8)	1.3	1.0 to 1.7	0.042
Intelligent	23.6 (14.7)	1.4	0.75 to 1.1	0.005
Stressed	70.7 (72.7)	0.94	0.75 to 1.1	0.628
Bored	46.2 (48.9)	1.0	0.83 to 1.2	0.994
Angry	57.5 (62.8)	0.87	0.71 to 1.0	0.185
Depressed	61.6 (66.3)	0.50	0.75 to 1.1	0.508
<b>Male</b>				
Year 8	17.3 (36.8)	3.1	2.6 to 3.8	0.000
Female	24.9 (29.3)	0.84	0.69 to 1.0	0.067
Maori	34.3 (26.5)	0.76	0.58 to 0.99	0.044
Pacific	26.3 (27.6)	1.6	1.3 to 2.1	0.000
Asian	12.1 (30.8)	3.8	2.8 to 5.1	0.000
Sexy	35.7 (25.4)	1.5	1.2 to 1.9	0.000
Stylish	54.0 (40.7)	1.6	1.3 to 1.9	0.000
Healthy	17.2 (12.6)	1.2	0.92 to 1.5	0.161
Intelligent	24.5 (20.7)	0.89	0.70 to 1.1	0.349
Stressed	58.7 (61.9)	0.99	0.80 to 1.2	0.956
Bored	43.8 (45.1)	1.0	0.87 to 1.2	0.535
Angry	60.4 (66.2)	0.81	0.66 to 0.99	0.046
Depressed	44.9 (51.8)	0.85	0.69 to 1.0	0.128

Ethnic reference group = European; n=2815; missing cases range 126–141.

acknowledge the emotional stereotypes, rather than the image stereotypes, which males were more likely to perceive to be associated with on-screen smoking. Consistent with previous research, susceptible non-smokers were more likely to appraise smokers in films in terms of positive image stereotypes.<sup>2</sup> Analysis of ethnic group differences identified that Pacific students are more likely to acknowledge that smokers in film are sexy, stylish, and intelligent compared students from other ethnic groups; a result that cannot be explained by frequency of viewing film, as Pacific students reported no significant differences in film viewing compared to European groups.

Findings from this study are consistent with previous research indicating that smoking images in media are variable but tend to be perceived more positively during early adolescence.<sup>11</sup> Previous studies have found that younger adolescents are attentive towards the stereotyped glamour (image) smokers, whereas older teens appraise the images with a greater level of ambivalence, and tend to associate film images of smoking with mood or situational factors.<sup>4, 5</sup> Studies have identified the importance of stress and depression as a factor in predicting smoking initiation and smoking maintenance, and young girls are especially aware of the association between smoking and relaxation, an image that is readily reinforced on-screen.<sup>20, 21</sup> Realistic images credit the viewer with the social competency to negotiate the image and to decipher a meaning according to the viewer's experiences and expectations.<sup>22</sup> Age differences in stereotyping smokers in film may also reflect factors such as the perceived normalcy of smoking, expectations of smoking behaviour derived from self or peers smoking.<sup>5</sup> However, that younger adolescents readily acknowledge the association between smokers in film and positive image characteristics, suggests that film offers a powerful means by which to register and reiterate the social acceptability and desirability of smoking.

Sex differences in appraisals of smoker stereotypes were also evident, with females acknowledging the emotional

sensitivity stereotypes, and males in general attending to the image specific stereotypes. Consistent with girls' appraisals of female smokers, girls also acknowledged the emotional sensitivity stereotypes associated with male smokers. Explanations for these findings may be attributed to environmental conditioning, whereby girls are socialised to be responsive, or empathic towards others compared to males.<sup>11</sup> Moreover, emotive images of male smokers are also highly pervasive, priming viewers to expect this association.<sup>23</sup> In effect, the power of the film image lies in the capacity to elicit a connection between the viewer's own world, and experience or expectations, and that which is represented on-screen. Stacey noted in her work on females' adoration of film stars, that empathy for a character's emotional status is an effective strategy designed to diminish the distance between star and viewer.<sup>24</sup> In essence, filmmakers are skilful at creating hyper-real characters and scenarios which, although often wildly fantastic in the context of viewing a film, are subsumed into the viewer's perceptions of their own world, and enhance the relationship between viewer and film star.

Results indicated that Pacific students were more likely than European students to appraise smokers in terms of image based stereotypes. Interestingly, Pacific students were also more likely than European students to identify with the emotional sensitivity stereotypes (bored and depressed) of male smokers in film. These findings suggest that interpretations of smoking in film may reflect cultural expectations or ideals of image and social and emotional expression, ideals that are shifting and responsive to broader popular cultural images. Pacific and Asian youth smoking rates are increasing in New Zealand, reflecting the impact of changes to adolescents' cultural and social environment on smoking behaviour.<sup>15, 16</sup> Currently we have little information on critical predictors of smoking initiation and maintenance among young Pacific or Asian. However, these results suggest that these groups may be particularly vulnerable to media portrayals of tobacco use as enhancing a positive social image, and a means to manage emotional distress.

### What this paper adds

Smoking imagery in film has been associated with smoking initiation and favourable attitudes towards smoking among adolescents. Previous research has also identified that images of tobacco use are perceived to be normative and appropriate depending on the context. The present research indicates that differences in sociodemographic and smoking susceptibility groups may influence young people's appraisals of emotional sensitivity stereotypes and image stereotypes of male and female on-screen smokers. Females and older adolescents are more likely to appraise smokers in terms of emotional sensitivity stereotypes (for example, stressed, bored, depressed, angry), whereas males, younger adolescents, susceptible non-smokers, and Pacific and Asian students were more likely to appraise smokers in terms of image stereotypes (for example, sexy, stylish, healthy, intelligent). However, image stereotypes (sexy and stylish) were significantly associated with smoking susceptibility.

Adolescents who were susceptible to smoking were significantly more likely to acknowledge the image stereotypes, compared to non-susceptible students. Previous research indicates that viewing smoking imagery in film is associated with future smoking.<sup>3</sup> One explanation may be that adolescents who are contemplating smoking are highly responsive to accessible (stereotypical), positive images of tobacco use which support their burgeoning interest in smoking behaviour.<sup>24 25</sup> Alternatively, it is also likely that frequency of viewing films with tobacco images, and viewing positive stereotype images on film, promote susceptibility to smoking.<sup>3</sup> Film, as an important cultural medium in adolescents' lives, presents a range of highly attractive images of tobacco use by popular film stars, who perform as idealised role models.<sup>23 24 26</sup> These findings suggest that although the stereotyped "positive" image of tobacco (that is, the sexy smoker) is attractive to younger adolescents, negative images of smoking (that is, stressed, bored, depressed) present an alternative "positive" image that may appeal to older adolescents, or specific subcultures. In essence, results from this study also suggest that although adolescents vary considerably in their appraisals of smokers in film, adolescents who are susceptible to smoking are more likely to identify with image rather than emotional characteristics of on-screen smokers.

### Conclusion

The data presented indicate that although adolescent group differences are important to appraisals of smokers in film, image stereotypes were found to be associated with smoking susceptibility among young people. To gain further understanding of the relation between exposure to film smoking and adolescent smoking, further replication and extension of these results is recommended.

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### REFERENCES

- 1 Tickle J, Sargent J, Dalton M, *et al.* Favorite movie stars, their tobacco use in contemporary movies, and its association with adolescent smoking. *Tobacco Control* 2001;**10**:16–22.
- 2 Sargent J, Dalton M, Beach M, *et al.* Viewing tobacco use in movies: does it shape attitudes that mediate adolescent smoking? *Am J Prev Med* 2002;**22**:137–45.
- 3 Dalton M, Sargent J, Beach M, *et al.* Effect of viewing smoking in movies on adolescent smoking initiation: a cohort study. *Lancet* 2003;**362**:281–5.
- 4 McCool J, Cameron L, Petrie K. Adolescent perceptions of smoking imagery in film. *Soc Sci Med* 2001;**52**:1577–87.
- 5 McCool J, Cameron L, Petrie K. Interpretations of smoking images in film among older teens. *Soc Sci Med* 2003;**56**:1023–32.
- 6 Shields D, Balbach E, McGee S. Hollywood on tobacco: how the entertainment industry understands tobacco portrayal. *Tobacco Control* 1990;**8**:378–86.
- 7 Walsh D. The challenge of the evolving media environment. *J Adolesc Health* 2000;**27S**:69–72.
- 8 Laugesen M, Scragg R. Trends in cigarette smoking in fourth-form students in New Zealand, 1992–1997. *N Z Med J* 1999;**112**:308–11.
- 9 Laugesen M, Scragg R. Tobacco smoking behaviour & health knowledge in a 2001 New Zealand national survey of 4<sup>th</sup> form students. ASH New Zealand Unpublished report, 2002.
- 10 Byrne D, Byrne A, Reinhart I. Personality, stress and the decision to commence cigarette smoking in adolescence. *J Psychosom Res* 1995;**39**:53–62.
- 11 Arnett J, ed. *Adolescence and emerging adulthood: a cultural approach*. New Jersey: Prentice Hall, 2001:145–7.
- 12 Allbutt H, Amos A, Cunningham-Burley S. The social image of smoking among young people in Scotland. *Health Educ Res* 1995;**10**:443–54.
- 13 Nichter M, Nichter M, Vuckovic, *et al.* Smoking experimentation and initiation among adolescent girls: qualitative and quantitative findings. *Tobacco Control* 1997;**6**:285–95.
- 14 Michell L. Girls, pecking order and smoking. *Soc Sci Med* 1997;**44**:1861–9.
- 15 Scragg R, Laugesen M. ASH Year 10 National Smoking Surveys 1992–2002. *Report to Action on Smoking and Health (ASH)*. Auckland, 2003.
- 16 McCool J, Cameron L, Petrie K. Smoking behaviour, expectations and parental smoking among Auckland young people. *N Z Med J* 2003;**116**(1176):U478.
- 17 Pierce J, Choi W, Gilpin E, *et al.* Validation of susceptibility as a predictor of which adolescents take up smoking in the United States. *Health Psychol* 1996;**15**:355–61.
- 18 Tyas S, Pederson L. Psychological factors related to adolescent smoking: a critical review of the literature. *Tobacco Control* 1998;**7**:409–20.
- 19 Cramer D. *Quantitative data analysis with SPSS for Windows: a guide for social scientists*. London: Routledge, 1997:184.
- 20 Byrne D, Mazanov J. Sources of adolescent stress, smoking and the use of other drugs. *Stress Med* 1999;**15**:215–27.
- 21 Lucas K, Lloyd B. Does smoking help adolescents cope with stress? *Public Health Medicine* 1999;**1**(3):94–7.
- 22 Gazetas A. *Imagining selves: the politics of representation, film narratives, and adult education*. New York: Peter Lang Publishers, 2000.
- 23 Pechmann C, Shih C. Smoking scenes in movies and anti-smoking advertisements before movies: effects on youth. *Journal of Marketing* 1999;**63**:1–3.
- 24 Stacey J. Feminine fascinations: forms of identification in star-audience relations. In: Hollows J, Hutchings P, Jancovich M, eds. *The film studies reader*. London: Arnold, 2000:147–54.
- 25 Aloise-Young P, Shenanigan K, Graham J. Role of self-image and smoker stereotypes in smoking onset during early adolescence: a longitudinal study. *Health Psychol* 1996;**15**:494–7.
- 26 Hilton M. *Smoking in British popular culture 1800–2000*. Manchester: Manchester University Press, 2000.