12 Results of a Dutch nationwide media campaign to quit smoking

Short-term but no long-term effects

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A comprehensive review on the effectiveness of 'smoking cessation series' indicates that results in this field of study appear to be inconclusive because of poorly designed research and because of contradictory research findings. This study targets this lack in understanding by evaluating a large scale mass media campaign held in The Netherlands from November 1999 to February 2000. Because this campaign was developed with an Entertainment-Education framework in mind, it may also contribute to research on the effectiveness of such an approach. Effects of the campaign were investigated using a panel (initial $N = 1200$) that was interviewed three times (in October 1999, February 2000 and January 2001) and two separate control groups ($N = 400$ each) to monitor the effects of pretesting. Exposure to the main component of the campaign, an Entertainment-Education show aired at prime time, predicted a quit attempt at the turn of the millennium, and progress in the stage of change in February 2000. Exposure to the campaign, however, did not have a positive impact on any smoking related behaviour or cognition measured in January 2001. The millennium campaign was successful in generating quit attempts, but did not sufficiently prevent relapse. It is suggested that if the underlying problem of addiction is tackled, future campaigns might be more successful.

12.1 Introduction

According to a comprehensive review of research on 'smoking cessation series' (Briss et al., 2000; Hopkins et al., 2001) research findings in this field of study are often inconclusive because of methodological shortcomings. Additionally, the few studies that did use an appropriate design produced inconsistent research findings. Research on the effectiveness of mass media led antismoking campaigns is therefore very much needed. In

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this study, we evaluate a campaign that made use of the Entertainment-Education approach (Singhal & Rogers, 1999, 2002).

The campaign that is evaluated started in November 1999 and lasted until February 2000. Its main aims were to double the number of quitters (from 150.000 individuals in the year before to 300.000 at January 1 2000) and second to improve the quality of cessation attempts. Additional goals were to promote a more positive attitude towards smoking cessation, to stimulate perceived self-efficacy and perceived social support, and to increase awareness of the availability of quit smoking aids.

Centrepiece of this campaign was a Nationwide Quit Attempt, designed to motivate smokers to quit at the start of the new millennium. The idea was mainly promoted during the last two months of 1999 by means of eight prime time television shows lasting 25 minutes each. In these shows, it was communicated that the Netherlands was making up its mind for a Nationwide Quit Attempt. The programmes further showed Dutch celebrities as they were faced with unanticipated challenges. For example, a well known Dutch graffiti artist was asked to make an original work of art within ten minutes.

During these shows, a phone number where people could register if they intended to quit was shown three times. Furthermore, telephonic counselling for those who wanted to quit was brought to the attention of the general public. Additionally, announcements were made about a smoking cessation TV course starting in the last week of 1999. The audience was further shown a clock ticking away the minutes until the new millennium, and counting the number of smokers intending to quit at the start of that new millennium. During the last show, aired on December 26 1999, the health minister revealed that 665.000 smokers intended to quit—more than 15% of all Dutch smokers at that time.

Additional campaign messages by means of infomercials were regularly aired in two non-prime-time programmes. Finally, as a follow up, a six episode television course was broadcasted, mainly in the course of January 2000, and not during prime time. This course provided information on how to handle withdrawal symptoms. All programmes were aired by a leading Dutch television network with 20 percent market share. The total cost of the campaign was three million euros, and was paid for by the Dutch expert centre on tobacco control (Stivoro) and the Dutch Cancer Association (KWF).

12.2 Theory

To conceptualize the possible 'effects' of exposure to an antismoking campaign on behaviours and cognitions, use was made of the Media Use as Social Action perspective (Bosman et al., 1989; Renckstorf & Wester, 2004). This perspective posits that not only the production of mediated messages, but also all acts of media consumption (including acts of anticipation, exposure, interpretation and elaboration of media messages) are to be seen as purposive, subjectively meaningful responses to subjectively defined problems. Thus, it was recognized that the audience of the Nationwide Quit Attempt might not anticipate, expose itself to, interpret, elaborate and learn from this campaign in ways that were intended by the initiators of the campaign.

The aim of the campaign was to educate people about the health consequences of smoking, to quit smoking, and to stay abstinent. However, the aims of mass media audiences are often very different. To them, exposing themselves to specific messages is part of a wider pattern of routines. These more comprehensive patterns of media use (e.g. 'watching television', 'following the news') tend to address much broader and more di-

verse 'needs', for instance diversionary needs and needs to keep in touch with world (Comstock & Scharrer, 2007; Katz, Gurevitch, & Haas, 1973; Kleemann & Matuschek, 2003; Rubin, 1984).

Of course, since acts of media use are known to recursively affect their own motivational bases (e.g. LaRose, Mastro, & Eastin, 2001) watching campaign messages may eventually bring about the positive health 'effects' even if audience members did not seek for such effects initially. Hence the basic idea of the Entertainment-Education Approach (Singhal & Rogers, 1999, 2002)—which argues that one should increase attention for Educational campaigns by using entertaining formats—may be a fruitful one. Yet, it is far for from certain that it will work, especially if such hard-to-change behaviour such as smoking is involved.

12.2.1 Stages of change

A central assumption of the Media Use as Social Action perspective is that actions (including the decision to quit smoking) are to be seen as a consequence of people's intentions. In the case of hard-to-change behaviours such as smoking, intentions for change may perhaps best be conceived as a long term plan. The so-called trans-theoretical model (Prochaska & DiClemente, 1983; DiClemente & Prochaska, 1998) elaborates on this idea by stating that lifestyle changes do not occur suddenly, but that they are the result of five successive stages of change: precontemplation, contemplation, preparation, action and maintenance. These stages are aptly described by Prochaska and Velicer (1997, p. 39):

> "*Precontemplation* is the stage in which people are not intending to take action in [...] the next 6 months. People [...] in this stage [...] [may be] ill-informed about the consequences of their behavior. Or they may have [...] become demoralized about their abilities to change. Both groups tend to avoid reading, talking, or thinking about their high risk behavior. [...] *Contemplation* is the stage in which people are intending to change in the next 6 months. They are more aware of the pros of changing but are also acutely aware of the cons. This [...] can produce profound ambivalence that can keep people stuck in this stage for long periods of time [... Like precontemplators, they] are also not ready for traditional action-oriented programs. *Preparation* is the stage in which people are intending to take action in the immediate future, usually measured as the next month. They have typically taken some significant action in the past year. These individuals have a plan of action, such as joining a health education class, consulting a counselor, talking to their physician, buying a self-help book, or relying on a self-change approach. These are the people we should recruit for such action-oriented programs as smoking cessation, weight-loss, or exercise. *Action* is the stage in which people have made specific overt modifications in their lifestyles within the past 6 months. [...] In smoking [...] only total abstinence counts [...]. *Maintenance* is the stage in which people are working to prevent relapse, but they do not apply change processes as frequently as do people in action. They are less tempted to relapse and increasingly more confident that they can continue their changes. Based on temptation and self-efficacy data, we estimated that maintenance lasts from 6 months to about 5 years" (italics added).

Research suggests that in the early stages the emphasis is on cognitive-affective changes (e.g. becoming aware of a problem and or its solutions) and that especially during these early stages, accidental or intentional media exposure may play a role in the creation of awareness. During the last stages, individuals tend to focus on making actual behavioural changes (Rosen, 2000a, 2000b). In brief, then, the trans-theoretical model suggests that smoking cessation is not something that happens all of a sudden, by chance, but that it tends to be the result of planned action. Consequently, the subjectively experienced readiness for smoking cessation is a very powerful predictor of any possible attempts to quit smoking (Dijkstra, Roijackers & De Vries, 1998).

12.2.2 Self-efficacy beliefs

In order to conceptualize the relationships that may exist between campaign exposure and behavioural change, we further used Bandura's concept of self-efficacy. This concept refers to "people's beliefs in their causative capabilities" (Bandura, 1995, p. 2) and may explain why campaign exposure may bring about subsequent behavioural change. Campaign exposure may be seen as an opportunity to learn from others by means of vicarious experience or by verbal persuasion. This may change someone's perceived self-efficacy, a change which in turn may provide a basis for behavioural change (Bandura, 1997). For instance, research suggests that increased self-efficacy for continuous abstinence has a positive effect on making a quit attempt and on the prevention of relapse (DiClemente, 1981; Marlatt, Baer, & Quigley, 1994; Mudde, Kok & Strecher, 1995). However, the relationship between behaviour and campaign exposure may also be the other way around, since heavy smoking may lower self-efficacy for continuous abstinence which in turn may motivate people to seek out campaign messages as an information resource (Van der Rijt & Westerik, 2004).

12.2.3 Research question

Aim of this study was to determine whether or not the Nationwide Quit Attempt had an impact on smoking and related cognitive and affective processes. What were the immediate and long-term effects of the various mass media elements of this campaign on self-efficacy of smokers, stages of smoking cessation, quit attempts and abstinence?

12.3 Methods

12.3.1 Study design

Effects of the millennium campaign were investigated using a panel that was interviewed three times (pretest, posttest 1 and posttest 2), and two separate control groups (one group for each posttest). The control groups were recruited to monitor the effect of pretesting. So they are not unexposed control groups for the purpose of evaluating the effectiveness of the intervention itself (smokers unexposed to the cessation series) although each of the panels and control groups include unexposed smokers. Control groups were surveyed only once, while panel volunteers were being interviewed up to three times.

The first wave of interviews (panel only) was in 1999, from September 23 to October 14. The second wave (panel and control group) was in 2000, from January 31 to March 4. The third wave (panel and control group) was in 2001, from January 2 to January 31. In the following we will refer to these intervals as October 1999, February 2000 and January 2001.

12.3.2 Sampling and response

All interviewees were selected using random digit dialling. In a preliminary interview (the 'screener'), the person who answered the phone was asked if s/he considered him / herself a smoker in October 1999, if s/he was 18 at that time, and if s/he was willing to participate in the telephone survey. If one of these questions was negatively answered, we asked if some other smoking adult member of the household was present. In that case, the aforementioned procedure was repeated.[1] The initial size of the panel was 1,200; the size of both control groups 400. Overall cooperation rates (American Association for Public Opinion Research, 2000) were computed by multiplying the percentage of respondents who granted the 'screener' times the percentage of households with at least one adult smoker present agreeing to a full interview. The overall cooperation rate for the panel group was 82.3% × 60.9% = 50.1%. Cooperation in the control groups was almost identical: 48.1% in February 2000, and 51.7% in January 2001.

12.3.3 Panel retention

Of the 1,200 initial panel members, 816 completed the second interview and 555 all three interviews. Hence, the overall panel retention was 46.3 percent. In order to determine the causes of retention, we correlated the number of interviews granted with some key demographic variables and confounders: gender, age, education, self-efficacy for continuous abstinence at pretest, stage of change at pretest, and having made a quit attempt before the pretest. Only two of these variables had a small but significant positive correlation with the granted number of interviews: age ($r = .06$; $N = 1{,}200$; $p < .05$ one-tailed) and 'quit attempt before pretest' ($r = .11$; $N = 1{,}200$; $p < .01$ one-tailed). This

Table 12.1 Representativeness of the eventual panel group ($N = 555$): gender and age at pretest

Age distribution	Population[a]	Panel
18-24	12%	8%
25-34	22%	18%
35-49	34%	46%
50-64	22%	20%
65+	11%	7%
N		555
Gender		
Male	55%	45%
Female	45%	55%
N		555

[a] Based on population estimates combined with results from earlier research on smoking prevalence (CBS, 2000; Stivoro, 2000).

means that young people and those who had never made a quit attempt before the pretest were the least likely to be retained.

12.3.4 Representativeness; sample profile

Due to selective response and panel mortality, the sex and age profile of our panel deviates somewhat from the pattern that was expected on the basis of earlier research on smoking prevalence by the Dutch expert centre on tobacco control [Stivoro] and the National Dutch Statistics Bureau [CBS]. Compared with these population estimates, people in the 35-49 age interval are overrepresented in our sample, and so are women (see Table 12.1).

We have no population data on educational level, occurrence of past quit attempts, daily cigarette intake, and 'stage of change' in October 1999. So we cannot asses the representativeness of our study in this respect. However, to give some impression of the composition of our sample, these data are presented in Table 12.2. They show that a third of the panellists retained at posttest 2 had completed college or university; more than three quarters had at least made one serious quit attempt (that lasted 24 hours or longer); a third of the interviewees had indicated at the pretest to smoke ten cigarettes per day or less, while almost a quarter indicated to smoke more than 20 cigarettes per day; more than a third of all the interviewees indicated at the pretest they had never

Table 12.2 Composition of the eventual panel group ($N = 555$): educational level and confounders at pretest.

Highest completed educational level	
Elementary or lower vocational	21%
Lower secondary	18%
Secondary vocational, O levels, A levels	29%
College or University	32%
N	534
Quit ever before pretest	
No	22%
Yes	78%
N	555
Daily cigarette intake at pretest	
Up to 10	33%
11-15	24%
16-20	20%
More than 20	23%
N	551
Stage of change at pretest	
No intention to quit (precontemplators)	37%
Will quit some day (precontemplators)	14%
Will quit within five years (precontemplators)	21%
Will quit within one year (precontemplators)	10%
Will quit within six months (contemplators)	11%
Will quit within one month (preparators)	8%
N	555

made a serious quit attempt; and 8 percent indicated they were planning to quit within one month.

12.3.5 Measures

Most measures that were used in this study were drawn from a Dutch inventory of measures for research on smoking (Mudde, Willemsen, Kremers, & De Vries, 2000). Measurement of nicotine dependence was based on another study (Etter, Vu Duc, & Perneger, 1999). Measures that were included in our analyses can be divided into five groups: (a) three demographic variables (gender, age, education); (b) eight confounders as measured at the pretest ('earlier quit attempts', 'nicotine dependency', 'stage of change', 'self-efficacy' for continuous abstinence, 'perceived pros' of continuous abstinence, 'perceived cons' of continuous abstinence, 'social support' for continuous abstinence, and 'knowledge of smoking cessation treatments'); (c) one variable measuring exposure to the Nationwide Quit Attempt TV shows (0 = never; 1 = at least once); (d) three binary criterion variables ('quit attempt at or around 1-1-2000', 'seven days abstinence at posttest 1', and 'twelve months abstinence at posttest 2'); and (e) six continuous criterion variables ('stages of change', 'self-efficacy' for continuous abstinence, 'perceived pros' of continuous abstinence, 'perceived cons' of continuous abstinence, 'social support' for continuous abstinence, and 'knowledge of treatments' for smoking cessation) measured at posttest 1 and 2. More information about measurement (and about reliability of the constructs) can be obtained by contacting the authors of this chapter.

12.3.6 Analysis of effects of pretesting

To determine the effectiveness of the campaign, a two step procedure was used. The first step was to find out whether the association between campaign exposure and criterion variables was equal for panel and relevant control groups.

For continuous criterion variables, this was done by employing two factor analysis of variance. So, for 'stage of change at posttest 1', we checked whether the interaction effect of 'campaign exposure' and 'group' (1 = panel, 2 = control) was significant (*F*-test, .05 level, two tailed testing). This was not the case. Nor did the interaction of 'campaign exposure' and 'group' explain a significant amount of variance of the other continuous criterion variables ('stage of change at posttest 2', 'self-efficacy at posttest 1', and 'self-efficacy at posttest 2'). This means there is no evidence for effects of pretesting as far as *continuous* variables are concerned, and that findings from the panel group can be generalised towards the general population.

To test for the equality of an association between *binary* criterion variables and exposure variables in panel and control groups, we used loglinear analysis. This analysis indicated that the effect of 'campaign exposure' on making a 'quit attempt' was similar in both the panel and the control group at posttest 1. The same was true for the effect of 'campaign exposure' on being '7 days abstinent at posttest 1'. However, in one cases our loglinear analysis indicated that the association between campaign exposure and criterion variable was different for panel and control groups. In technical terms: there was a significant interaction of 'group' × 'campaign exposure' × 'twelve months abstinence at posttest 2' ($\chi^2 = 7.8$; $df = 1$; $p < .01$). This means that in this case, we cannot make an

unqualified generalisation of the effect of campaign exposure on 'twelve months abstinence at posttest 2' towards the whole population.

12.3.7 Estimation of campaign effects

The second step in determining the effect of the campaign consisted in testing the actual campaign effects in the panel groups. For determining the effect of the campaign on *continuous* variables use was made use of analysis of partial correlations. For determining the effect of the campaign on *binary* variables, use was made of logistic regression, using the same controls. In all these analyses we controlled for the effects of the demographic variables and confounders mentioned earlier.

12.4 Results

The millennium campaign attracted large attention in both media and society. Because the control group at posttest 1 was interviewed shortly after the campaign and was not pretested, data from this group ($N = 400$) are likely to be the best estimates of the impact of the campaign. In this group, 86% indicated to be aware of the fact that a Nationwide Quit Attempt had taken place; 80% said they had heard about it on TV; 38% had discussed the campaign; 27% had watched at least one of the TV shows that were at the heart of the campaign; and 15% indicated they had made at least one quit attempt at the turn of the millennium. So it is safe to say the Nationwide Quit Attempt achieved considerable success in reaching its target audience.

12.4.1 Short term effects on cessation and abstinence

Our data further suggest that the campaign was successful in generating quit attempts. Table 12.3 reveals that smokers who had watched at least one episode of the Nationwide Quit Attempt TV Show were more likely than others to have made a quit attempt at the turn of the millennium. Using binary logistic regression, we were also able to establish that this effect remained significant after controlling for the effect of gender, age, education, self-efficacy for continuous abstinence at pretest, stage of change at pretest, quit attempt before pretest, and nicotine dependency at pretest. However, Table 12.3 also reveals that this increased number of quit attempts in January 2000 did not result in an increased number of abstinent smokers in February 2000; at posttest 1, there was no dif-

Table 12.3 The effect of having watched at least one show in the Nationwide Quit Attempt TV series on having made a quit attempt at or around 1-1-2000 and seven days abstinence at posttest 1 (February 2000).

Criterion variable	Did not watch any TV show	Watched TV show	*p* (bivariate[a])	*p* (multivariate[b])
Quit attempt	17.3%	23.5%	.025	.035
seven days abstinence at posttest 1	6.0%	7.8%	.204	.248
N	549	255		

[a] One-tailed significance, based on Fisher exact test. [b] One-tailed significance, based on change in –2 log likelihood, controlling for demographic variables and confounders.

ference between having watched at least one Nationwide Quit Attempt TV Show and being abstinent for at least seven days.

12.4.2 Effect on stage of change and cognitions related to smoking

In Table 12.4, the short-term and long-term effects of the campaign on stage of change and cognitions related to smoking are shown. In the first row, we see that TV show exposure predicted stage progression at posttest 1 but had no such effect at posttest 2. So, in the month after the TV shows, those who had watched the TV show were often inclined to be involved in a quit attempt, and less likely to be a precontemplator. However, a year after the campaign, this effect had disappeared.

The campaign had no effect on 'self-efficacy for continuous abstinence' at posttest 1 or at posttest 2. Neither did it have a beneficial (negative) effect on the perceived cons of continuous abstinence. In fact, those who saw at least one episode of the TV shows thus had a significantly increased awareness of the cons of giving up smoking. Perhaps this is to be explained as the result of cognitive dissonance created by campaign exposure, as a defensive reaction of smokers against the appeal in these shows to give up smoking. Anyway, this adverse effect of campaign exposure was only short-lived; exposure to a TV show promoting the Nationwide Quit Attempt did not predict perceived cons at posttest 2.

Campaign exposure did have short-term positive effects on the perception of pros of continuous abstinence. It also seems to have increased social support. However, both effects were short-lived. By January 2001, they had disappeared. Finally, we found no effect (either positive or negative) of campaign exposure on knowledge of treatments for smoking cessation.

12.4.3 Long term effects

We further analysed the long term effects of the campaign on abstinence. In January 2001, we found that 15 out of 555 remaining panel members (i.e. 2.7%) had been abstinent for at least 12 months. However, not all panelists were equally likely to be ab-

Table 12.4 Partial correlation between 'TV show exposure' and variables indicative 'stage of change' and cognitions related to smoking

	Partial correlations[a]	
	Posttest 1	Posttest 2
Stage of change	.08*	–.01[n.s.]
Self-efficacy for continuous abstinence	–.04[n.s.]	–.02[n.s.]
Perceived cons of continuous abstinence	.08[n.s.]	.04[n.s.]
Perceived pros of continuous abstinence	.07*	.02[n.s.]
Social support for continuous abstinence	.08*	–.04[n.s.]
Knowledge of smoking cessation treatments	–.04[n.s.]	.02[n.s.]
	$df = 792$	$df = 529$

* $p < .05$; ** $p < .01$; *** $p < .001$ (one-tailed)

[a] Controlling for the effect of gender, age, education, 'earlier quit attempts', 'nicotine dependency', 'stage of change', 'self-efficacy', 'perceives pros', 'perceived cons', 'social support', and 'knowledge of smoking cessation treatments' as measured at pretest.

stinent. Of the 181 panel members who had been exposed to at least one episode of the Millennium Quit Attempt TV show, only one (i.e. 0.6%) was found to be 12 months abstinent at post test 2. On the other hand, among the 365 panel members who had not seen any of these TV shows, 13 (or 3.6%) had stayed abstinent for 12 months or more. Controlling for demographic variables using logistic regression did not cancel out this effect.[2] The negative effect of 'TV show exposure' on '12 month's abstinence' was, however, not reproduced in the non-pretested control group. So, the negative effect of 'TV show exposure' cannot be generalised towards the general population.[3]

12.5 Discussion

In this study, we have evaluated parts of the Nationwide Quit Attempt that took place in the Netherlands in December 1999 and January 2000. We focused on the centerpiece of this intervention, the TV show that promoted the idea of a Nationwide Quit Attempt. We found that a large majority of the 4,000,000 smokers in The Netherlands were aware of the Attempt, that a quarter of all smokers saw at least some of the TV shows promoting the idea, and that eventually more than 600,000 smokers made a quit attempt. So, when we generalise our finds to a more general, theoretical level, we can conclude that the Entertainment-Education approach employed was successful in promoting the idea of a Nationwide Quit Attempt. Many smokers moved into the action stage—but one year later no lasting positive effect could be detected.

We do not believe that our failure to detect lasting effects is due to the imperfect measurement of the intervention. Of course, in the here reported study we focused only on the effect of exposure to the TV shows promoting the idea of a nationwide quit attempt. One could argue that this focus is misplaced, and that the effect of other elements of the media campaign should have been studied as well. In fact, that is exactly what we have done, for instance we have analysed the effects of free publicity and of discussion about the campaign, but none of these analyses revealed additional effects beyond that of the media campaign. We further looked for those response effects,[4] but such analyses revealed no effects either. We did not find any lasting positive effect.

Another possible cause of our failure to detect lasting effects may be that we were confronted with rather limited panel retention. Only 555 (or 46%) of the original number of 1200 panelists were retained. This level of panel retention has reduced the statistical power of the performed tests, especially the test aimed at detecting long term effects at posttest 2. However, the absence of positive long term effects of the campaign exposure was so obvious, that even a higher retention would have resulted only in very small effects, if any at all.

A third explanation for the fact that we found no beneficial effect for campaign exposure may have to do with the fact that campaign exposure was self-administered. Consequently we cannot rule out that the campaign did have a true effect. For instance, one might argue that low self-efficacy may have the short term effect of motivating people to seek advice from TV programmes on smoking and the long term effect of promoting relapse (Van der Rijt & Westerik, 2004). However, we went at great lengths to control for all possible causes of relapse, including self-efficacy.

So, all in all we are convinced that there are no methodological shortcomings that have prevented the detection of campaign effects. This means that we believe that we have to take our findings at face value, i.e. as evidence supporting the idea that the me-

dia campaign brought about some beneficial short-term but no long-term effects. The apparent problem of the media campaign was that it could motivate people to quit, but it could not prevent relapse, and this made the campaign ineffective in the long-term. Or to put it in terms of the theories used: the audience 'picked up' and made use of the idea of a large scale quit attempt, but the information supplied by the campaign was apparently not useful in cementing the will and the ability to give up smoking for ever.

A conclusion that can be drawn from our campaign evaluation is that future campaigns must become more effective in relapse prevention. The organisers of the Dutch millennium campaign (Stivoro) have concluded that in the future communication with the target audience should continue into the maintenance stage, so that quitters can experience sustained emotional and informational support. But above all, at a theoretical level, our findings show that having a large scale televised campaign does not automatically bring about change in such deeply ingrained habits such as smoking. As such, our study provides another illustration of the limited power of the media (cf. Renckstorf & Wester, 2004). This study shows that a campaign maybe hugely successful in the short-term—generating hundred of thousands of quit attempts in a population of only a few millions—but still have no lasting effect.

Perhaps, in future campaigns, mediated messages should be accompanied by real life measures that more effectively discourage smoking and prevent relapse. By making non-carcinogenic nicotine delivery systems (e. g. nicotine gum, patches) cheaper than carcinogenic ones (cigarettes), we may redefine smoking from a necessity to a lifestyle choice. In such a situation, the media—like now—will then still be helpful in motivating people to quit. However, quitters will then be able to remain abstinent!

Notes

1 If the primary contact suggested more than one candidate, only that candidate whose birthday was next was interviewed.
2 Removal of 'TV show exposure' from the model predicting '12 months abstinence' resulted in a change of its –2 log likelihood of 7.6 ($df = 1$; $p = .004$ one-tailed).
3 But one cannot be too sure about that, because there are some doubts about the reliability of TV show exposure in the control group at posttest 2. Recall of TV show exposure was 18% in this group, which is much lower than the 27% for the control group at posttest 2.
4 That is, we looked for the effects of campaign exposure operationalised as a continuous variable, not as a binary one.

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