

Evaluation of the 2014 media campaign against smoking in France: a longitudinal study

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Introduction

- Media campaigns conducted in the context of comprehensive tobacco control programs can promote quitting (Durkin 2012)
- Negative health effects campaigns (why to quit) could be more effective than positively-toned ones (how to quit), in particular when they are based on emotional, graphic and/or testimonial contents (Durkin 2009, 2012)
- On the occasion of the National Smoking Reduction Program 2014-2019 in France, INPES launched a media campaign (September 2014). Its objectives were :
 - To emphasize the negative health effects associated with smoking
 - To encourage smokers to use the French quitline and web-based cessation program, *Tabac Info Service*
- Emotionally evocative ad
- Broadcast on TV (2 ads), radio and internet (960 GRPs amongst 25-49 years-old)



Objectives of the study

Identify a relationship between the exposure to the campaign and:

- The evolution of attitudes regarding smoking and smoking cessation (perceived vulnerability, anticipated regret, self-efficacy, intentions to quit)
- The use of smoking cessation services (quitline and website, health professionals, nicotine replacement therapy)
- Quit attempts and smoking cessation

METHODS

Study design

- 3000 smokers aged 15-85 were recruited through an Access panel (quota sampling) to be interviewed by Internet:
 - Just before the launch of the campaign (T0, 10-24th September 2014)
 - Just after the end of the campaign (T1, 27th October – 10th November 2014)
 - About 6 months after the campaign (T2, 4-22th March 2015)
- Quotas used for the baseline sample: sex, age, occupation, size of urban unit, region (reflecting the 2010 smokers' population structure observed in the French Health Barometer, probability sample)

Main outcomes

- **Perceived vulnerability/risk perception** : *how worried are you about smoking damaging your health in the future? (very / rather = 1, rather not / not at all = 0)*
- **Anticipated regret**: *if you do not stop smoking in the next 6 months, will you regret it? (certainly / probably = 1, probably not / certainly not = 0)*
- **Use of Tabac Info Service (TIS) in the last 30 days** (quitline, website)
- **Quit attempts** in the last 30 days (at least 24h / at least 7 days)
- **Smoking status** (smoker, 7-day quitter)

Secondary outcomes

- **Intentions to quit smoking:** *Are you planning to quit smoking in the next month ? In the next 6 months ? Sometime in the future, beyond 6 months? Or are you not planning to quit?*
- **Self-efficacy:**
 - *If you decided to quit smoking, how confident are you that you would succeed? (very / rather = 1, rather not / not at all = 0)*
 - *You know what to do to quit smoking (strongly agree / rather agree = 1, rather disagree / strongly disagree = 0)*
- **Use of assistance other than *Tabac info service (TIS)* to stop smoking** (health professional, nicotine replacement therapy)

Advertising exposure data

- **Recall of the campaign** on TV, radio, or internet (collected at T1; 81% yes)
- **Likely number of TV exposures** according to media plan and TV viewing habits (collected at T1 or T2 and recoded by quintiles of the distribution):
 - Less than 6 contacts
 - From 6 to less than 16 contacts
 - From 16 to less than 28 contacts
 - From 28 to less than 42 contacts
 - 42 contacts or more

→ Recall of campaign used as a dichotomous variable, likely number of exposures as a continuous one

Analysis

- **For quit attempts and quitting:**

- ✓ Subjects: the respondents at T1 / T2
- ✓ Logistic regressions on the outcome according to the level of exposure, adjusted for sex, age, employment status, level of education, level of income, Heaviness of Smoking Index (HSI) at T0, quit attempts in the last 30 days reported at T0

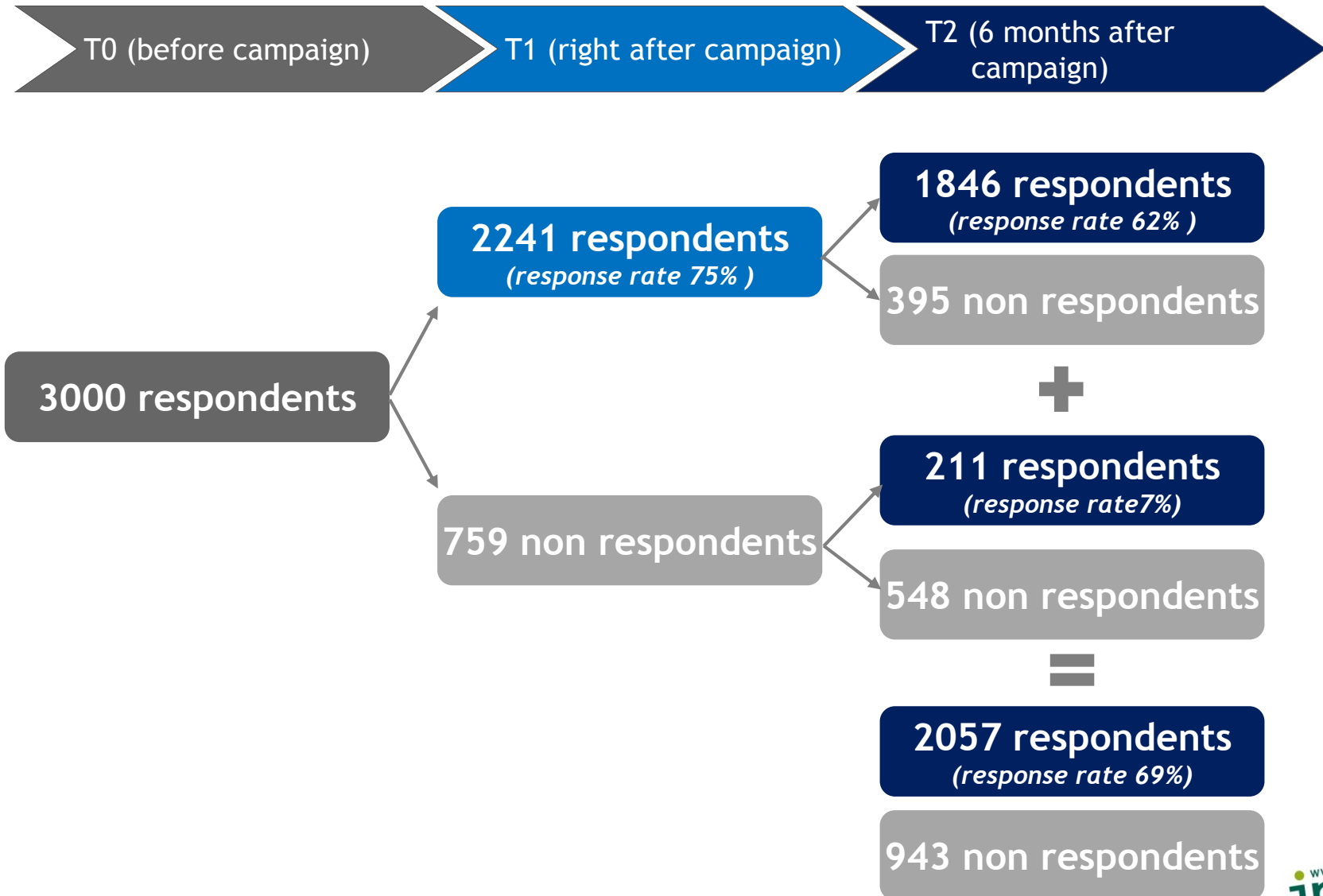
- **For other variables:**

- ✓ Subjects: respondents at T1 / T2 **who did not have the favourable attitude at T0** (*eg who reported they were not worried about smoking damaging their health*)
- ✓ Logistic regressions on the outcome according to the level of exposure, adjusted for sex, age, employment status, level of education, level of income, Heaviness of Smoking Index (HSI) at T0
- ✓ The models deal with the **change of attitude** observed in T1/T2, compared to T0

→ Data weighted on the smokers' population structure in terms of sex, age, region, size of urban unit and occupation

RESULTS

Flow of participants



Effectiveness at T1: main outcomes (1/2)

- **Perceived vulnerability** at T1 is related to the recall of the campaign among smokers whose perceived vulnerability was low at T0, and an almost significant positive association is observed with the likely number of TV contacts ($p=0.07$).
- An association between **anticipated regret** at T1 and level of exposure is observed.
- The **use of TIS** (quitline and website) is strongly associated with the likely number of TV contacts.

Odds-ratios and 95% confidence intervals for exposure variables

	Recall	Likely number of TV contacts
Perceived vulnerability (n=493)	2.0** [1.2-3.3]	1.14 [0.99-1.31] ($p=0.07$)
Anticipated regret (n=743)	1.6* [1.0-2.3]	1.24*** [1.10-1.39]
Use of TIS quitline (n=2191)	1.5 [0.6-4.1]	1.28* [1.01-1.61]
Use of TIS website (n=2143)	1.6 [0.8-3.2]	1.46*** [1.22-1.75]

*: $p<0.05$; **: $p<0.01$; ***: $p<0.001$

Effectiveness at T1: main outcomes (2/2)

- No association between **quit attempts** in the last 30 days and the level of exposure.
- **Quitting** at T1 is related with recall of the campaign, but not with the likely number of TV contacts.

Odds-ratios and 95% confidence intervals for exposure variables

	Recall	Likely number of TV contacts
24h quit attempt	1.1 [0.9-1.5]	1.03 [0.95-1.11]
7-day quit attempt	1.1 [0.7-1.5]	0.93 [0.84-1.04]
Has quit smoking for at least 7 days	1.7* [1.0-3.0]	0.91 [0.79-1.04]

*: $p < 0.05$

Effectiveness at T1: secondary outcomes

- No association between intentions to quit and level of exposure.
- Self-efficacy (*knows what to do to quit smoking*) is negatively associated with the likely number of TV contacts.
- The use of help from a health professional and the use of nicotine replacement therapies are associated with the level of exposure.

Odds-ratios and 95% confidence intervals for exposure variables

	Recall	Likely number of TV contacts
Plans to quit (n=781)	0.9 [0.6-1.3]	1.00 [0.89-1.12]
Plans to quit in the next 6 months (n=1169)	1.0 [0.7-1.4]	1.05 [0.94-1.17]
Plans to quit in the next month (n=1873)	1.2 [0.8-2.0]	1.05 [0.93-1.19]
Sure of succeeding (n=981)	0.9 [0.6-1.3]	0.94 [0.84-1.05]
Knows what to do to stop smoking (n=616)	0.9 [0.6-1.5]	0.85* [0.75-0.97]
Use of assistance from a health professional (n=2062)	2.7** [1.4-5.0]	1.12 [0.97-1.29]
Use of NRTs (n=2055)	2.4** [1.3-4.4]	1.36*** [1.16-1.60]

*: p<0.05; **: p<0.01; ***: p<0.001

Effectiveness at T2

Main outcomes :

- **Perceived vulnerability** and **anticipated regret** at T2 are positively related with the likely number of TV contacts (OR = 1.20* [1.03-1.40] and OR = 1.14* [1.03-1.33] respectively).
- No association between **quit attempts** or **quitting** at T2 and the level of exposure is observed

Secondary outcomes :

- At T2, **intentions** to quit '*in the future*' are related with the likely number of TV contacts (OR = 1.21** [1.06-1.38]), but not intentions to quit in a short timeline.
- **Self efficacy** (*confident in chances of succeeding*) at T2 is negatively related with the recall of the campaign (OR = 0.6** [0.4-0.8]).

DISCUSSION

Strengths and limits of the study

- Strengths
 - The longitudinal design enables to assess the **change** in attitudes according to the level of exposure (vs cross-sectional analysis)
 - Analyses adjusted for socio-economic variables and smoking behaviour at baseline
 - The likely number of TV contacts cannot be determined by smoking attitudes
- Limits
 - Causal relationship cannot be demonstrated
 - Possible reversed causality between attitudes and the recall of the campaign
 - Quality of psychosocial measures (1 item for 1 dimension)
 - Associations observed at T2 should be considered with caution due to a media campaign specifically promoting TIS (quitline and website) occurring in January 2015

Discussion – Conclusion (1/2)

- Associations between perceived vulnerability/ anticipated regret and level of exposure, that hold 6 months after the campaign: consistent with campaign type and objectives
- Strong associations between the level of exposure and the use of TIS quitline and website, as well as assistance received from a health professional and use of NRTs
- Negative association with self-efficacy:
 - Rejection / denial ?
 - Reflects perception of poor availability of assistance for smoking cessation in France ? (vs Stop Smoking Services in the UK for example)
- 6 months after the campaign, the likely number of TV contacts is related with intentions to quit: a potential longer-term impact?

Discussion – Conclusion (2/2)

- No consistent relationship between the level of exposure and quit attempts or quitting + overall modest effects: disruptive findings / prior research in that field
 - Specific effects of mass media campaigns in non anglo saxon countries ?
More research needed
 - Lack of intensity of exposure ? (cf Wakefield et al : plead for repeated cycles of higher intensity campaigns)
 - Need to alternate between hard hitting campaigns and positive ones ?
 - Need to be part of a more comprehensive tobacco control program ?
- Preliminary findings; more analysis to come

Thank you for your attention !

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