

## Research paper

## Cigarette smoking as a stigma: Evidence from France

Patrick Peretti-Watel<sup>a,b,c,\*</sup>, Stéphane Legleye<sup>d,e</sup>, Romain Guignard<sup>f</sup>, François Beck<sup>f,g</sup><sup>a</sup> INSERM, UMR912 "Economics and Social Sciences Applied to Health & Analysis of Medical Information" (SESSTIM), 13006 Marseille, France<sup>b</sup> Aix Marseille University, UMR\_S912, IRD, 13006 Marseille, France<sup>c</sup> ORS PACA, Southeastern Health Regional Observatory, 13006 Marseille, France<sup>d</sup> Institut National des études Démographiques (Ined), Paris, France<sup>e</sup> INSERM, U669, Univ Paris-Sud and Univ Paris Descartes, UMR-S0669 Paris, France<sup>f</sup> Institut National de Prévention et d'Éducation pour la Santé (INPES), 93203 St Denis Cedex, France<sup>g</sup> Cermes3 - Equipe Cesames (Centre de recherche Médecine, Sciences, Santé, Santé mentale, Société, Université Paris Descartes, Sorbonne Paris Cité/CNRS UMR 8211/Inserm U988/EHESS), Paris Cedex 06, France

## ARTICLE INFO

## Article history:

Received 26 March 2013

Received in revised form 13 June 2013

Accepted 30 August 2013

## Keywords:

Cigarette smoking

Stigma

Motives for stigma

Healthism

France

## ABSTRACT

**Background:** There is growing evidence that cigarette smoking has become a stigmatized behaviour, at least in western countries, and there is ongoing debate among experts about whether or not such stigma should be an instrument of anti-tobacco policy.

**Methods:** We investigated French non-smokers attitudes toward cigarette smokers, using data from a telephone survey carried out in 2010 among a representative random sample of non-smokers aged 15–75 ( $N = 3091$ ). We carried out a cluster analysis to build contrasted attitudinal profiles and we also computed a score of stigmatization.

**Results:** We found evidence for the existence of stigma associated with cigarette smoking in France: a majority of French non-smokers would not date a smoker, nor hire one to take care of their children. The cluster analysis identified four contrasting profiles, corresponding to different levels of stigmatization, including one cluster whose respondents demonstrated strong levels of moral condemnation and social rejection of smokers. Older people, those with a lower educational level and those reporting financial difficulties were more prone to stigmatize smokers, while those who reported that somebody smoked in their home were less likely to do so. Those who had never smoked and those who abstained from alcohol were more prone to stigmatize smokers. Obese people were also more likely to do so (in bivariate analysis only).

**Conclusion:** The process of tobacco stigmatization seems well-advanced in France, despite a cultural context that may be less permeable to this process. Further research is needed as our results raise some questions regarding its efficiency as a policy tool. First, people who are familiar with smokers are less prone to stigmatize them. More generally, simultaneously stigmatizing several categories of people may provide each of these same categories with stereotyped 'others' onto whom they can deflect their stigma.

© 2013 Elsevier B.V. All rights reserved.

## Introduction

*Stigma, moral condemnation and social rejection*

Initially coined by Goffman in the 1960s, the concept of 'stigma' refers to "an attribute that binds a person to an undesirable stereotype, leading other people to reduce the bearer "from a whole and usual person to a tainted, discounted one" (Goffman, 1963: 11). Goffman distinguished between three types of stigmas:

physical handicaps and deformities, blemishes of individual character inferred from deviant behaviours or conditions (e.g. addiction, homosexuality, unemployment), and membership of a particular community (e.g. a racial or religious group). Goffman did not refer to smokers, as smoking was neither a health nor a moral issue in the early 1960s, but today cigarette smoking would correspond to the second type of stigma.

Two main and complementary aspects of stigma are moral condemnation (stigmatized people are usually subject to pejorative labels and negative assessments which emphasize their moral inferiority) and social rejection ('normal' people tend to avoid those who are stigmatized). Avoidance of stigmatized people may be driven by either instrumental (when they are perceived as dangerous/contagious) or symbolic motives (willingness to express

\* Corresponding author at: ORS PACA, Southeastern Health Regional Observatory, 13006 Marseille, France. Tel.: +49 610 2861; fax: +49 610 2899.

E-mail address: [patrick.peretti-watel@inserm.fr](mailto:patrick.peretti-watel@inserm.fr) (P. Peretti-Watel).

personal values, to clarify the normative contours of societal boundaries and the consequences of non-conformity). These two motives, which can be referred to as “keeping people away” and “keeping people in” (Phelan, Link, & Dovidio, 2008), are frequently entangled with one another. For example, aversion to contact with a HIV-infected person could be considered as a composite of aversion to strangers, infection, immorality, and misfortune (Rozin, Markwith, & McCauley, 1994). More generally, historians and anthropologists have shown that across time and space people considered guilty of a moral transgression have been frequently perceived as tainted and contagious (Douglas, 1966; Foucault, 1988).

#### *The moral condemnation of cigarette smokers*

There is little doubt that cigarette smoking has become a deviant and stigmatized behaviour, at least in western countries (Bayer & Stuber, 2006; Goldstein, 1991; Hughes, 2002; Markle & Troyer, 1979; Stuber, Galea, & Link, 2009). For example, in Australia, smokers are routinely depicted in everyday discourse and media representations as malodorous, unattractive, selfish and thoughtless addicts, but also as antisocial polluters and employer liabilities (Chapman & Freeman, 2008). In France, an opinion survey conducted in 1999 suggested that smokers were viewed in a hostile and derogatory way: a majority of the French population view smokers as drug-addicted individuals who should be held responsible for their health problems. They considered that cigarette smoking caused more problems in society than illegal substance use (Beck, Legleye, & Peretti-Watel, 2003).

Prevention campaigns also contribute to compound smokers' spoiled identities, by portraying them as cigarette slaves, self-indulgent and lacking self-control, and depicting smoking as “a personal vice” and a “sign of weakness” (Lupton, 1995, pp. 128 and 152). Indeed, health has become a sort of ‘super value’, a metaphor for all that is good in life, and personal health is supposed to depend mainly, if not exclusively, on the individual's behaviour: this cultural feature has been labelled ‘healthism’ (Crawford, 1980). Consequently, preserving one's health has become a moral imperative (Lupton, 1995), and unhealthy behaviours tend today to be considered deviant behaviours. ‘Healthism’ could be viewed as an aspect of the contemporary ‘risk culture’ (Giddens, 1991): individuals are exhorted to be continuously aware of risks and opportunities in order to ‘colonize’ their future, and smokers in particular are expected to plan out their long-term health by quitting now. From this viewpoint, people who continue to indulge in unhealthy behaviours such as cigarette smoking show an inability or refusal to secure their future. Accordingly, they break the new behavioural norms promoted by risk culture and ‘healthism’. They deliberately shorten their life expectancy and display their moral inferiority at the same time.

#### *The social rejection of smokers*

The case of cigarette smoking is also very illustrative of the connection mentioned above, between contagion, immorality and blame. Half a century ago, although still widespread in the population, smoking was already described as a contagious condition:

“Smoking is spread by smokers. Each time a smoker lights up, he proclaims anew his support for the smoking of tobacco (. . .) Each word of appreciation of smoking also tends to spread the disease. Every smoker is, in fact, actively infectious and makes himself into a gratuitous advertisement for tobacco. (. . .) Psychological infection of the non-smoker is completed as a

rule by the intimate persuasion of a smoker.” (Johnston, 1957: 10–11)

In this quotation, the reference made to contagion was probably at least partly metaphorical. Nevertheless, beyond metaphor, cigarette smoking has been increasingly described as a contagious disease in scientific literature. The World Health Organization promotes the notion of ‘global tobacco pandemic’ with an epidemic diffusion model (WHO, 2003). Furthermore the psychological notion of ‘social contagion’ was applied to cigarette smoking by Glad and Adesso (1976). In addition, in lay people's terms, smoking is a bad example for others, and especially children. Last but not least, smokers are endangering the health of all others around them, due to passive smoking.

As a consequence, there are both symbolic and instrumental motives for physically avoiding smokers, and some empirical studies suggest that non-smokers are, indeed, prone to doing just that. For example, according to Australian studies, advertisements for shared accommodation commonly list non-smoking as an essential attribute in would-be housemates (Chapman, 1992), and people advertising on dating websites overwhelmingly specify that they are looking for non-smokers (Chapman, Wakefield, & Durkin, 2004). Moreover, a survey conducted in New-York found that most smokers anticipate that most non-smokers would be reluctant to date a smoker or to hire her/him to take care of their children (Stuber, Galea, & Link, 2008). In the same study, one current or former smoker out of six also reported an experience of smoking-related discrimination (difficulties in finding a house, a job or a health insurance).

#### *The French context*

The prevalence of smoking is higher in France than in Anglophone countries (about one third of French adults are current smokers: 30% in 2010, vs 27% in the USA, 21% in the UK, 20% in Canada, and 17% in Australia, see WHO, 2011), despite very similar tobacco control policies, including raising taxes on cigarettes, smoke-free legislation in public spaces, health warnings on tobacco packages and bans on tobacco advertising, promotion and sponsorship. Most of these policies were implemented or strengthened in France during the 2000s, but smokers' compliance with smoke-free policies was poor, at least at the beginning (Guilbert, Baudier, & Gautier, 2001). Similarly, French tobaccoists poorly comply with the law prohibiting tobacco sales to minors, and they also constitute a powerful lobby.

Moreover, cigarettes may have had a culturally valued place in France in ways distinct from their history in Anglophone countries, which is probably why so many of the examples Richard Klein cites in “Cigarettes are Sublime” are from French intelligentsia (we thank an anonymous referee for this remark), including the picture on the book cover (Klein, 1993). Many great figures of contemporary French culture are usually portrayed with a pipe or a cigarette (philosophers like Sartre and Camus, writers like Malraux, singers like Gainsbourg or Bashung), and when the French government first raised the cigarette taxes in 1976, trade unions strongly protested, claiming that cigarettes were an “antidote” to the tensions inherent in workers' lives (Padioleau, 1977). Cigarettes are still highly valued, at least among the working classes, where there is frequently an intergenerational transmission of smoking (Peretti-Watel, 2012). Thus cigarettes are more likely to be a “cultural artifact” in France than in Anglophone countries (Brennan, 1989). More generally, French people may be less committed to contemporary ‘healthism’, as they are less prone to consider unhealthy behaviours, including fat diet, as an indication of moral or psychological weakness (Stearns, 2002).

## Aims of the present study

The study's aims were threefold: (1) to describe French non-smokers opinions and attitudes toward smokers, and to investigate whether or not indicators of social rejection and moral condemnation combined into meaningful patterns of stigmatization toward smokers; (2) to characterize the socio-demographic profile of non-smokers who are prone to stigmatizing smokers; (3) to provide answers to some questions related to stigmatization motives. First, as people who are committed to 'healthism' have symbolic motives to stigmatize smokers, are healthy habits (which may reveal such commitment) positively correlated to the stigmatization of smokers? Conversely, concerning people who are themselves more exposed to health-related stigma: are they less prone to stigmatize smokers? Finally, parents may have an instrumental motive to stigmatize smokers, as they may fear the "psychological infection" of their children. Accordingly, is there a positive correlation between living with children and stigmatizing smokers? These aims were addressed while keeping in mind the specificities of the French context.

## Methods

### Study design and data collection

We used data from 'Health Barometer 2010', a telephone survey on health perceptions, knowledge, attitudes and behaviours conducted by the French National Institute for Prevention and Health Education (INPES). It was carried out between October 2009 and July 2010 on a large representative random sample of the general population aged 15–85, living in France and speaking French. This survey was based on a two-stage random sampling design. Residents of collective dwellings, hospitals and institutions were excluded from the target population. Private households with land-line telephones, whether in the telephone directory or not, were included in the sample as were those people owning only mobile phones. Unsuccessful calls were repeated up to 40 times, on different days and at different times. The first sampling step was household selection (by phone number), the second step being the random selection of an eligible subject within the household using the Kish method (Kish, 1949).

The interviews were conducted using a computer-assisted telephone interview (CATI) system. All collected data were anonymous and self-reported. The study protocol included a formal invitation to participate, explaining the objectives of the study. This was delivered by post before (or after, for subjects with confidential numbers whose address was initially unknown) the first telephone call. The study design and protocol were approved by the French Commission on Data Privacy and Public Liberties (CNIL) (for a more extensive presentation of methods, see Beck, 2011). The refusal rate was 39% and 27,653 questionnaires were fully completed. Only a randomly selected subsample of non-smokers (i.e. people who answered 'no' when asked "do you smoke, at least occasionally") aged 15–75 answered the module containing questions related to opinions and attitudes toward smokers ( $N = 3091$ ).

### Measures

We used a 4-point Likert scale to assess respondents' agreement with eight statements. In these statements we simply used the word 'smoker', with no additional detail, which is common practice in studies conducted to investigate lay people's attitudes toward stereotypes (Beck, Guignard, du Roscoat, & Briffault, 2009; Hahn, Eirmbter, & Jacob, 1994; Peretti-Watel, 2003; Stuber et al., 2008). Two statements were related to perceived social distance

**Table 1**

Assertions related to non-smokers' opinions and attitudes toward smokers, French Health Barometer 2010 ( $N = 3091$ , INPES).

Perceived social distance between smokers and non-smokers: <i>There is a kind of war between smokers and non-smokers.</i> <i>Nowadays, smokers are less accepted by others.</i>
Avoidance of smokers: <i>I could hire a smoker to take care of your children.<sup>a</sup> (AS1)</i> <i>I could date someone who smokes. (AS2)</i>
Moral condemnation of smokers: <i>Smokers set a bad example for youth. (MCS1)</i> <i>Smoking is a sign of personal failure. (MCS2)</i> <i>Smokers care enough about the health of people who breathe their smoke (MCS3)</i>
Attitude toward tobacco control: <i>Higher cigarette taxes are justified.</i>

Response items: strongly agree (=4), agree (=3), disagree (=2), strongly disagree (=1). Stigmatization score (ranging from 5 to 20):  $5-(AS1) + 5-(AS2) + (MCS1) + (MCS2) + 5-(MCS3)$ .

<sup>a</sup> Respondents who had no child were asked to imagine what they would do if they had some.

between smokers and non-smokers, two were related to personal avoidance of smokers (adapted from Stuber et al., 2008), three were dealing with moral condemnation of smokers, and one was measuring respondents' attitudes toward rises in cigarette excise tax rates (see Table 1). As such rises are considered as quite annoying for smokers, we expected that people who stigmatize smokers would be more prone to favour them. Table 1 also detailed the computation of a 'stigmatization score', combining responses to the five items dealing with avoidance and moral condemnation of smokers (score ranging from 5 to 20).

The questionnaire also collected data on respondents' socio-demographic background, including gender, age, educational level, presence of minors in the household and perceived financial situation of the household (with one five item response collapsed into a binary outcome: comfortable/fine vs tight/difficult/in debt).

We also considered smoking status (having never smoked, former occasional smoker, former daily smoker), alcohol use (using the AUDIT-C screen (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998)) and body mass index (BMI). We assumed that former daily smoking, at-risk drinking and obesity were indicators of potential exposure to health-related stigma, while never having smoked and alcohol abstinence were indicators of proximity to healthism (a 'normal' BMI was not considered as such, as BMI is a very poor proxy for diet and exercise). Finally, respondents were asked whether or not there was a smoker in their household. We included this variable in the analysis as a potential confounding factor.

### Statistical analysis

Data were weighted with respect to the inclusion probability (depending on the number of telephone lines and the number of eligible persons in each household). They were also adjusted to distributions in the French population (available from the National Institute of Statistics and Economic Studies) according to gender, age, educational level, geographical region and level of urbanization. All statistical analyses were performed using the weighted data.

We first presented results for opinions and attitudes toward smokers, and then performed a cluster analysis of the corresponding eight statements. This statistical tool was useful to summarize the variety of respondents' answers in a limited set of contrasting profiles, in order to detect meaningful patterns of opinions and attitudes expressed regarding smokers. The results of a cluster analysis reflect the strongest correlations existing between variables used in the analysis, thus this method gave the opportunity to test the relevance of our 'stigmatization score'. As we expected the five items used to compute this score to be strongly correlated one

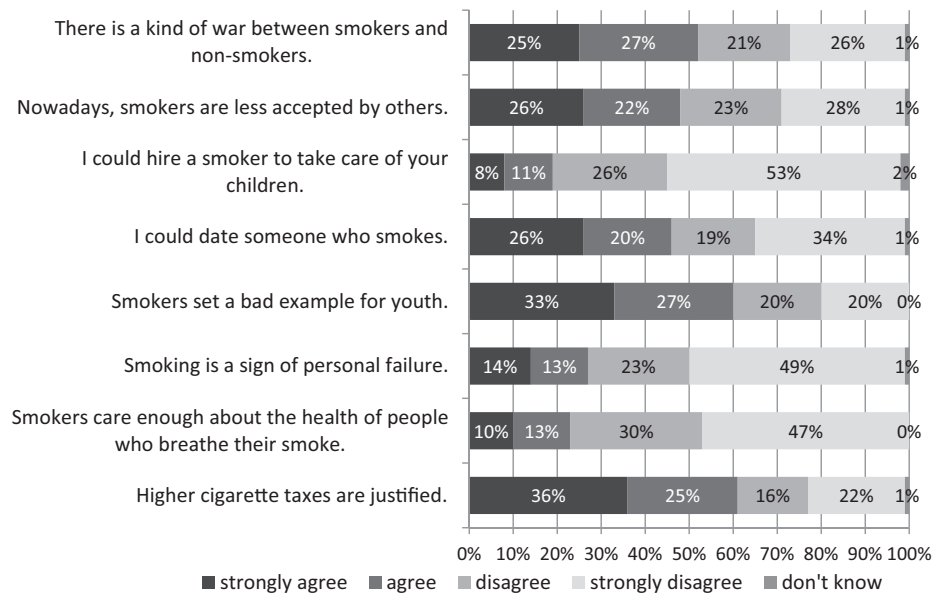


Fig. 1. Non-smokers' opinions and attitudes toward smokers, French Health Barometer 2010 (N=3091, INPES).

with another, we also expected to obtain clusters characterized by contrasted mean stigmatization scores. Moreover, the cluster analysis allowed us to detail the distribution of respondents along this score (for example, we could obtain either two clusters of similar size with symmetric opinions toward smokers, or an opposition between a minority characterized by extreme attitudes and a majority with close-to-the-average opinions).

Responses were encoded from 1 ("strongly disagree") to 4 ("strongly agree"), and non-responses were replaced with mean values. The resulting eight scores were transformed to Z-score form prior to clustering with the usual agglomerative hierarchical procedure (Anderberg, 1973). We used the usual agglomerative hierarchical procedure: each observation begins in a cluster by itself, then the two closest clusters are merged to form a new one that replaces the two old clusters, and the merging of the two closest clusters is repeated until only one cluster is left. We used the Ward's method to compute the distance between two clusters. At every step, clusters were less homogeneous but partitions became more easily interpretable. Usually, analysts select a partition if it contains a reasonable number of clusters and if the next step of the hierarchical clustering induces a great loss of homogeneity. Partitions with three to six clusters were compared, and the four-cluster solution was selected. Pearson's  $\chi^2$  were used to describe the selected partition, by comparing respondents' opinions and attitudes across all resulting clusters. For this description, the 4-point Likert scale used to gather information about opinions and attitudes toward smokers was collapsed into a binary outcome ("strongly agree" or "agree" vs other responses). The mean 'stigmatization score' was also computed for each cluster, and the resulting means were compared using the Student's *t* test. The four clusters were compared in terms of socio-demographic background, health-related behaviours and the existence of a smoker in one's home (with Pearson's  $\chi^2$ ). Finally, we modeled the stigmatization score, using a standard linear regression (with the covariates listed in the previous sentence, and a stepwise selection procedure, selection threshold = 0.05).

## Results

### Opinions and attitudes toward smoking and smokers

Non-responses were rare (0–2%, see Fig. 1). Two opinions were endorsed by a majority of non-smokers: *higher cigarette taxes*

*are justified* (61% of non-smokers agreed or strongly agreed) and *smokers set a bad example for young people* (60%). About half of respondents stated that they would agree to *dating someone who smokes* (46% agreed or strongly agreed), and a similar proportion endorsed the following two statements: *nowadays, smokers are less accepted by others* (48%) and *there is a kind of war between smokers and non-smokers* (52%). Only small proportions of non-smokers qualified *smoking as a sign of personal failure* (27%), or considered that *smokers care enough about the health of people who breathe their smoke* (23%). Only 19% of non-smokers declared that they would *hire a smoker to take care of their children*.

### Cluster analysis results

Table 2 details the four-cluster partition. Cluster 1 gathered 23% of non-smokers. We labelled it *low stigma*, as these respondents were the least prone to stigmatize smokers (i.e. they had the lowest stigmatization score). Most of them stated that they would date a smoker (89%) and hire one to take care of their children (74%). They were less likely to perceive social distance between smokers and non-smokers, to endorse assertions expressing moral condemnation of smokers (only 7% stated that smoking is a sign of personal failure), and to consider that higher cigarette taxes were justified.

Cluster 2 (15% of the whole sample) had an average stigmatization score (13.1). A majority of these non-smokers perceived social distance between them and smokers, and most stated they would avoid dating or hiring a smoker. Moral condemnation of smokers was quite common among this cluster (73% agreed that smokers set a bad example for young people, while 40% agreed that smoking is a sign or personal failure), despite the fact that they all considered that smokers do indeed care about the health of people who breathe in their smoke. We labelled this profile *medium stigma toward careful smokers*.

Cluster 3 (34%) also had a stigmatization score close to the average (13.7). Within this cluster, a relatively low number of non-smokers regarded themselves as socially distant from smokers, 44% stated that they would date a smoker and 49% considered that smokers set a bad example for young people. While 11% stated that smoking is a sign of personal failure, only 2% would hire a smoker to take care of their children and only 4% considered that smokers care about the health of people who breathe their smoke. We labelled this profile *medium stigma toward careless smokers*.

**Table 2**  
Cluster analysis on non-smokers' opinions and attitudes toward smokers, French Health Barometer 2010 (N = 3091, INPES).

	Cluster 1 (n = 704)	Cluster 2 (n = 480)	Cluster 3 (n = 1046)	Cluster 4 (n = 861)	Total
	Column % (strongly agree, agree)				
There is a kind of war between smokers and non-smokers.	39%	60%	33%	<u>81%</u>	52%
Nowadays, smokers are less accepted by others.	33%	60%	29%	<u>77%</u>	48%
I could hire a smoker to take care of your children.	74%	8%	2%	4%	19%
I could date someone who smokes.	89%	38%	44%	16%	45%
Smokers set a bad example for youth.	28%	73%	49%	<u>91%</u>	60%
Smoking is a sign of personal failure.	7%	40%	11%	<u>56%</u>	27%
Smokers care enough about the health of people who breathe their smoke.	25%	<u>100%</u>	4%	1%	23%
Higher cigarette taxes are justified.	41%	65%	55%	<u>84%</u>	61%
Stigmatization score [5–20], mean score:	9.7	13.1	13.8	<u>17.0</u>	13.7

Each row variable is significantly associated with the typology ( $p < 0.001$ , Pearson's  $\chi^2$  test for categorical variables, Student's t test for the stigmatization score). Within each row the highest column percentage (mean, for the last row) is underlined.

Finally, stigmatization was greatest among Cluster 4 (28% of the whole sample) (the stigmatization score equalling 17.0). Most of the participants in this cluster stated that there is a kind of war between smokers and non-smokers (81%) and that smokers are less accepted (77%) in society, and that this social distance between smokers and non-smokers is reflected in personal avoidance of smokers: only 4% would hire a smoker to take care of their children, while only 16% said they would date a smoker. Moral condemnation of smokers was also higher among this group: 91% stated that smokers set a bad example for young people, 56% agreed

that smoking is a sign of personal failure, and only 1% considered that smokers care about the health of people around them. Finally, within this profile, labeled *strong stigma*, 84% of respondents supported higher cigarette taxes.

Overall, this cluster analysis illustrated the relevance of the 'stigmatization score', with four clusters characterized by contrasted mean scores. This analysis also illustrated various combinations between attitudes expressed toward smokers: Clusters 2 and 3 had similar mean stigmatization scores, while respondents gathered in Cluster 3 were less likely to regard themselves as

**Table 3**  
Socio-demographic background and health-related behaviours associated with non-smokers' opinions and attitudes toward smokers, French Health Barometer 2010 (N = 3091, INPES).

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
	Column %			
Gender				
Male (N = 1419)	50%	47%	44%	44%
Female (N = 1672)	50%	53%	56%	56% ns
Age				
15–24 (N = 472)	23%	11%	17%	9%
25–34 (N = 404)	20%	12%	13%	8%
35–49 (N = 787)	30%	22%	27%	22%
50–64 (N = 919)	21%	33%	28%	37%
65–85 (N = 509)	6%	22%	15%	24%***
Educational level				
Below high-school graduation (N = 1789)	48%	69%	58%	60%
High-school, 1st university degree (N = 897)	35%	20%	30%	27%
>2 years completed at university (N = 405)	17%	11%	12%	13%***
Perception of household's financial situation				
Tight/difficult/in debt (N = 1133)	33%	41%	35%	39%
Comfortable/fine (N = 1958)	67%	59%	65%	61%**
Smoking status				
Never smoked (1731)	50%	50%	62%	58%
Former occasional smoker (440)	15%	15%	11%	16%
Former daily smoker (920)	35%	35%	27%	26%***
Alcohol use (Audit-C)				
Abstainers (N = 385)	10%	21%	12%	10%
Low-risk drinking (N = 1785)	50%	52%	58%	67%
At-risk drinking (N = 921)	40%	27%	30%	23%***
Body Mass Index				
Normal weight (N = 1774)	62%	53%	58%	55%
Overweight (N = 917)	27%	32%	30%	30%
Obesity (N = 400)	11%	15%	12%	15%*
Household composition				
No minor (N = 1982)	53%	68%	64%	70%
At least one minor person (N = 1110)	47%	32%	36%	30%***
Somebody smoking at home				
Nobody smokes at home (N = 2283)	65%	68%	77%	80%
Somebody smokes regularly/occasionally (N = 808)	35%	32%	23%	20%***

ns, not significant.

\* Statistically significant at  $p < 0.05$  (Pearson's  $\chi^2$ ).

\*\* Statistically significant at  $p < 0.01$  (Pearson's  $\chi^2$ ).

\*\*\* Statistically significant at  $p < 0.001$  (Pearson's  $\chi^2$ ).

socially distant from smokers, but more prone to express concern toward smokers indifference about non-smokers' health. Finally, the cluster analysis also gave a weight to those four contrasted attitudinal profiles.

#### Characterization of clusters: socio-demographic profile and health-related behaviours

In terms of socio-demographic background, the sex ratio was similar for all clusters (see Table 3). In contrast, the propensity to stigmatize smokers greatly increased with age: 43% and 27% of *low stigma* respondents, were aged 15–34 and 50–85 respectively, vs 17% and 61% of *strong stigma* respondents. The former cluster was also characterized by a higher educational level (52% were high-school graduates vs 40% for the *strong stigma* cluster) while respondents in the *medium stigma toward careful smokers* and *strong stigma* clusters were more likely to report having financial difficulties.

Regarding past/present health-related behaviours and current health condition, belonging to the *strong stigma* and *medium stigma toward careful smokers* clusters was associated with former smoking (50% of these groups were former smokers). At-risk drinking prevalence was highest in the *low stigma* cluster and lowest in the *strong stigma* cluster (40% vs 23%), while obesity was significantly associated with respondents in the *strong stigma* and *medium stigma toward careful smokers* clusters. Respondents in the *low stigma* and *medium stigma toward careful smokers* clusters reported more frequently that at least one person smoked in their home (35% and 32%, respectively, vs 23% and 20% for the *medium stigma toward careless smokers* and *strong stigma* clusters).

#### Determinants of smokers' stigmatization

Table 4 details the factors associated with the stigmatization score. After adjustment for other covariates, gender, BMI and household composition were no longer significant predictors of this score. The propensity to stigmatize smokers strongly increased with age. Indicators of socioeconomic status were also very strongly associated with stigmatization: it was lower among those who had a higher educational level, and among those who rated their household financial situation as comfortable/fine. Regarding health-related behaviours, former smokers were less prone to stigmatize smokers, especially former regular smokers. The stigmatization score also decreased with increased use of alcohol. Finally, people who reported living with somebody who smoked in their home were also less likely to stigmatize smokers.

## Discussion

### Main results

A cluster analysis conducted on a large representative sample of French non-smokers identified four contrasting clusters of opinions and attitudes toward smokers, corresponding to different levels of stigmatization. This included one cluster whose respondents demonstrated strong levels of moral condemnation and social rejection of smokers. Older people, those with a lower educational level and those reporting financial difficulties were more prone to stigmatize smokers than, for example, respondents who reported that somebody smoked in their home. Regarding potential instrumental and symbolic motives for stigma, living with children was not associated with stigmatization of smokers, while those who had never smoked and those who abstained from alcohol were more prone to stigmatize smokers.

**Table 4**

Factors associated with the score measuring stigmatization toward smokers among non-smokers, linear regression, French Health Barometer 2010 (N = 3091, INPES).

	$\beta$ coefficient
Gender	
Male	NS
Female (ref.)	
Age	
15–24 (ref.)	–0–
25–34	+0.23 ns
35–49	+0.70***
50–64	+1.51***
65–85	+2.54***
Educational level	
Below high-school graduation (ref.)	–0–
High-school, 1st university degree	–0.44**
>2 years completed at university	–0.68***
Perception of household's financial situation	
Tight/difficult/in debt (ref.)	–1–
Comfortable/fine	–0.27*
Smoking status	
Never smoked (ref.)	–0–
Former occasional smoker	–0.67***
Former daily smoker	–1.11***
Alcohol use (Audit-C)	
Abstainers (ref.)	–0–
Low-risk drinking	–0.45*
At-risk drinking	–1.06***
Body Mass Index	
Normal weight (ref.)	NS
Overweight	
Obesity	
Household composition	
No minor (ref.)	NS
At least one minor person	
Somebody smoking at home	
Nobody smokes at home (ref.)	–0–
Somebody smokes regularly/occasionally	–0.84***

ref., reference category for  $\beta$  coefficients computation; NS, not selected by the step-wise selection procedure; ns, not significant.

\* Statistically significant at  $p < 0.05$  (for  $\beta$  coefficient, Student's  $t$  test).

\*\* Statistically significant at  $p < 0.01$  (for  $\beta$  coefficient, Student's  $t$  test).

\*\*\* Statistically significant at  $p < 0.001$  (for  $\beta$  coefficient, Student's  $t$  test).

### Limitations of the present study

Before discussing our results, we must acknowledge several limitations of the study. First, our data may be biased, since a significant minority of the contacted households/people refused to participate (39%). However, there is no particular reason to suspect that refusal was linked to opinions and attitudes toward smokers, as the letter announcing the survey did not give any details about the topics to be investigated. Secondly, telephone surveys generally induce social desirability response bias which may partly dissuade respondents from reporting their true opinion about smokers (Holbrook, Green, & Krosnick, 2003; Moskowitz, 2004). Similarly, there is no guarantee that the respondents who declared that they would hire or date a smoker would really do so. Thirdly, the quantitative approach of using a closed-ended questionnaire prevented respondents from qualifying or justifying their opinions and attitudes. It is therefore possible that important associated aspects were not adequately investigated. Fourthly, we only addressed one aspect of smoker stigmatization: unlike previous studies, we did not investigate how smokers themselves perceive and react to such stigma (including self-stigmatization) (Stuber et al., 2008, 2009). Finally, any analysis based on cross-sectional data dealing with opinions, attitudes and behaviours must be interpreted cautiously, so one should consider our discussion as exploratory rather than conclusive.

### The stigma of cigarette smoking

In 2001, Bruce G. Link and Joe C. Phelan proposed a conceptual framework to characterize stigma. They complemented Goffman's seminal work, which focused on interpersonal relationships, by taking into account the social, cultural, political and economic forces that structure stigma. They defined stigma as the co-occurrence of five different elements, the first four being: labelling and distinguishing a minority, linking it to pejorative stereotypes, separating stereotyped ones from 'normal' people, and discriminating against them. These four elements require a fifth: stigmatized people lack social, economic or political power in relation to those who stigmatize them (Link & Phelan, 2001). This characterization can be used as a checklist to determine the relevance of the stigma concept in a specific context (Stuber et al., 2009). We used this checklist to assess the existence of such stigma in the French context.

The first, third and fifth elements are present in many developed countries, including France: cigarette smokers are a distinct minority (of the total sample of respondents in the 2010 Health Barometer survey, only 27% of people aged 15–85 were regular smokers). In recent years laws have banned smoking from work places and enclosed public spaces, including restaurants, bars and discotheques, and the social differentiation of cigarette smoking is increasing, as it is more and more concentrated in underprivileged populations (Peretti-Watel, Constance, Seror, & Beck, 2009). The results presented here provide evidence for the two remaining elements: in this survey a significant proportion of French non-smokers endorsed pejorative and stereotyped views regarding smokers, and a majority would not date a smoker, nor hire one to take care of their children.

#### Socioeconomic status and stigma

We found that smokers' stigmatization was significantly more frequent among people with a low level of education, as well as among those who reported facing financial difficulties. This is surprising, since in France, as in many other countries, tobacco use is increasingly concentrated among the poor (Peretti-Watel, Constance, et al., 2009). In Anglophone countries, 'healthism' is much stronger among the middle class, and Crawford (1980) himself emphasized that the middle class were more likely to endorse this cultural feature. Thus this association between a low socioeconomic status and smokers' stigmatization is probably specific to the French cultural context, and it deserves further consideration.

#### Age and stigma

Our results showed a strong positive relationship between increasing age and stigmatization of smokers. This reflects previous studies which found a similar relationship with respect to the stigmatization of HIV-infected people (Hahn et al., 1994), heroin users (Peretti-Watel, 2003), obese people (Hilbert, Rief, & Braehler, 2008) and the mentally-ill (Beck et al., 2009; Silton, Flannelly, Milstein, & Vaaler, 2011). Our cross-sectional data did not enable us to distinguish between any possible generational or life-cycle effect. With respect to the former, older generations lived through a period when smoking was considered perfectly normal and was even lauded, so it seems strange that they would be inclined to stigmatize smokers. Instead, the life-cycle effect would appear to provide a more plausible explanation: generally speaking, when growing older people may become more conservative and more hostile to deviant behaviours (Glen, 1974; Inglehart, 1997; Schwartz, 2007). This general statement has been recently challenged in the US context (Danigelis et al., 2007), but it seems still relevant in France (Muxel, 2011; Schweisguth, 2011). More

specifically, ageing people may become increasingly committed to 'healthism'. Previous studies suggest that older people are more prone to prioritize health over anything else (Peretti-Watel, Seror, du Roscoät, & Beck, 2009) and that 'healthism' may be associated with conservatism (Cheek, 2008). But once again this association may be specific to the French context: by contrast, in the USA, due to the strong libertarian vein in political culture, conservatives may be more prone to oppose tobacco control policies (we thank an anonymous reviewer for this remark). Thus further research would be necessary to investigate in detail the relationships between cultural context, age, conservatism and 'healthism'.

#### Familiarity and stigma

We found that former smokers and non-smokers who reported that there was at least one smoker in their home were concentrated in the clusters labelled *low stigma* and *medium stigma toward careful smokers* (corresponding to respondents who considered that smokers care enough about the health of people who breathe in their smoke). Linear regression analysis showed that these non-smokers were less prone to stigmatize smokers. One could argue that former smokers and people living with someone who smokes in their home have more empathy with smokers, and thus are less prone to stigmatization. Similarly, a previous study suggested that people who have had personal contact with someone hospitalized for mental illness had a less ostracizing, critical attitude toward the mentally ill (Boyd, Katz, Link, & Phelan, 2010). More generally, it is probably easier to have stereotyped judgments toward unfamiliar people and, reciprocally, familiarity may reduce stigma (Phelan et al., 2008). As the decline in the prevalence of smoking and the exclusion of smoking from public space (two necessary conditions of stigmatization) increase the unfamiliarity of smokers, these two features may facilitate symbolic motives for stigmatizing smokers and stigma may fuel stigma.

#### Motives for stigmatizing smokers

We found some empirical support for symbolic motives only: stigmatization of smokers was not correlated to living with children, but it was positively associated to having never smoked and alcohol abstinence and that could reveal a person's commitment to 'healthism'. More surprisingly, in bivariate analyses, obese people were more prone to stigmatize smokers (they were over-represented in the *strong stigma* and *medium stigma toward careful smokers* clusters). Additional analyses (not displayed here) showed that obese respondents were more likely to socially reject smokers, but not morally condemn them. Why would obese people stigmatize smokers?

People who engage in risky behaviours seek reassurance and deflect the 'risky/deviant' label by 'scapegoating', i.e. describing another deviant minority in a stereotypical and derogatory way as having behaviours which are at a 'higher risk' than their own (Peretti-Watel & Moatti, 2006). For example, cannabis and ecstasy users frequently make a sharp distinction between their own drug use (considered safe, controlled and convivial) and heroin or crack use (described as dangerous, compulsive and antisocial) (McElrath & McEvoy, 2001; Parker, Alridge, & Measham, 1998; Power, Power, & Gibson, 1996). Similarly, people who endorse a pejorative view of heroin users tend to underestimate the dangers of alcohol and tobacco (Peretti-Watel, 2003). Thus obese people, who suffer from stigmatization (Sikorski et al., 2011), may have a symbolic motive to stigmatize cigarette smokers: to deflect the stigma they themselves experience onto others. Of course, further research is needed to explore this assumption. It would be also interesting to explore the opposite: are smokers more prone to stigmatize obese people?

## Smokers, stigmatization and public health

Over the last decade, the World Health Organization has promoted a strategy of ‘denormalisation’ of smoking, aiming at changing norms toward it in order to make it less acceptable (Bell, McCullough, Salmon, & Bell, 2010), and the stigmatization of smokers by non-smokers may be a relevant marker of such a cultural shift (Chapman & Freeman, 2008). Despite a specific cultural context that may contribute to hinder this very process, our results suggest that tobacco denormalisation is already well-advanced in France. Nevertheless, the factors associated with this process in our study may be quite distinct from those observed in Anglophone countries. Similar cultural specificities may also contribute to explain differences observed between Anglophone countries regarding tobacco denormalisation (Hammond, Fong, Zanna, Thrasher, & Borland, 2006).

There is ongoing debate among public health experts and social scientists about whether or not stigma could be an acceptable instrument of public health policy, especially concerning tobacco control policies (Bayer & Stuber, 2006; Bayer, 2008; Bell, Salmon, Bowers, Bell, & McCullough, 2010; Burris, 2008). Stigma-inducing policies may be very effective in reducing smoking prevalence, but they have counterproductive consequences (increasing social inequalities, encouraging secrecy and social withdrawal from non-smokers, etc.) (Alamar & Glantz, 2006; Graham, 2012; Stuber et al., 2009). Further empirical research on this topic is needed. For example, the ‘efficiency’ of stigma probably depends on those who stigmatize smokers, and our results suggest that people who are more familiar with smokers are less prone to stigmatize them. Our study also suggests that the ongoing stigmatization of unhealthy behaviours may have another downside: simultaneously stigmatizing several categories of people (obese people, cigarette smokers, heroin users, etc.) provides each of these same categories with stereotyped “others” onto whom they can deflect their stigma.

## Acknowledgements

The French National Institute for Prevention and Health Education (INPES) provided access to the dataset. This research was conducted thanks to a grant from the French Institute for Public Health Research (IRESP).

## Conflict of interest statement

None declared.

## References

- Alamar, B., & Glantz, S. (2006). Effect of increased social unacceptability of cigarette smoking on reduction in cigarette consumption. *American Journal of Public Health, 96*(8), 1359–1363.
- Anderberg, M. R. (1973). *Cluster analysis for applications*. New York: Academic Press.
- Bayer, R. (2008). Stigma and the ethics of public health: Not can we but should we. *Social Science and Medicine, 67*(3), 463–472.
- Bayer, R., & Stuber, J. (2006). Tobacco control, stigma, and public health: Rethinking the relations. *American Journal of Public Health, 96*(1), 47–50.
- Beck, F., Legleye, S., & Peretti-Watel, P. (2003). *Penser les drogues: Perceptions des produits et des politiques publiques*. Paris: OFDT [in French].
- Beck, F., Guignard, R., du Roscoat, E., & Briffault, X. (2009). Attitudes et opinions vis-à-vis de la dépression. In C. Chan Chee, F. Beck, D. Sapinho, & P. Guilbert (Eds.), *La dépression en France* (pp. 121–142). Saint-Denis: INPES [in French].
- Beck, F. (2011). Perception des risques et surveillance des comportements de santé: L’apport des Baromètres santé. In P. Astagneau, & T. Ancelle (Eds.), *Surveillance Épidémiologique* (pp. 296–302). Paris: Lavoisier [in French].
- Bell, K., McCullough, L., Salmon, A., & Bell, J. (2010). Every space is claimed: Smokers’ experiences of tobacco denormalisation. *Sociology of Health and Illness, 32*(6), 914–929.
- Bell, K., Salmon, A., Bowers, M., Bell, J., & McCullough, L. (2010). Smoking, stigma and tobacco ‘denormalization’: Further reflections on the use of stigma as a public health tool. A commentary on *Social Science & Medicine’s* Stigma, Prejudice, Discrimination and Health Special Issue. *Social Science & Medicine, 70*, 795–799.
- Boyd, J. E., Katz, E. P., Link, B. G., & Phelan, J. C. (2010). The relationship of multiple aspects of stigma and personal contact with someone hospitalized for mental illness, in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology, 45*(11), 1063–1070.
- Brennan, T. (1989). Towards the cultural history of alcohol in France. *Journal of Social History, 23*(1), 71–92.
- Burris, S. (2008). Stigma, ethics and policy: A commentary on Bayer’s “Stigma and the ethics of public health: Not can we but should we”. *Social Science & Medicine, 67*, 473–475.
- Bush, K., Kivlahan, D. R., McDonell, M. B., Fihn, S. D., & Bradley, K. A. (1998). The AUDIT alcohol consumption questions (AUDIT-C): An effective brief screening test for problem drinking. *Archives of Internal Medicine, 158*(16), 1789–1795.
- Chapman, S. (1992). Shared accommodation—non-smokers wanted. *Tobacco Control, 1*, 248.
- Chapman, S., & Freeman, B. (2008). Markers of the denormalisation of smoking and the tobacco industry. *Tobacco Control, 17*(1), 25–31.
- Chapman, S., Wakefield, M. A., & Durkin, S. J. (2004). Smoking status of 132,176 people advertising on a dating website. Are smokers more desperate and dateless? *Medical Journal of Australia, 181*(11–12), 672–674.
- Cheek, J. (2008). Healthism: A new conservatism? *Qualitative Health Research, 18*(7), 974–982.
- Crawford, R. (1980). Healthism and the medicalization of everyday life. *International Journal of Health Services, 10*(3), 365–388.
- Danigelis, N. L., Hardy, M., & Cutler, S. J. (2007). Population Aging, Intra-cohort Aging, and Sociopolitical Attitudes. *American Sociological Review, 72*(5), 812–830.
- Douglas, M. (1966). *Purity and danger*. London: Routledge & Kegan Paul.
- Foucault, M. (1988). *Madness and civilization: A history of insanity in the age of unreason*. New York: Vintage Books.
- Giddens, A. (1991). *Modernity and self-identity*. Stanford: Stanford University Press.
- Glad, W., & Adesso, V. J. (1976). The relative importance of socially induced tension and behavioral contagion for smoking behavior. *Journal of Abnormal Psychology, 85*(1), 119–121.
- Glen, N. D. (1974). Aging and conservatism. *Annals of the American Academy of Political and Social Science, 415*, 176–186.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice Hall.
- Goldstein, J. (1991). The stigmatization of smokers: An empirical investigation. *Journal of Drug Education, 21*(2), 167–182.
- Graham, H. (2012). Smoking, stigma and social class. *Journal of Social Policy, 41*(1), 83–99.
- Guilbert, P., Baudier, F., & Gautier, A. (2001). *Baromètre santé 2000. résultats*. Paris: éditions CFES [in French].
- Hahn, A., Eirmbter, W. H., & Jacob, R. (1994). Le sida: Savoir ordinaire et insécurité. *Actes de la Recherche en Sciences Sociales, 104* [in French].
- Hammond, D., Fong, G. T., Zanna, M. P., Thrasher, J. F., & Borland, R. (2006). Tobacco denormalization and industry beliefs among smokers from four countries. *American Journal of Preventive Medicine, 31*(3), 225–232.
- Hilbert, A., Rief, W., & Braehler, E. (2008). Stigmatizing attitudes toward obesity in a representative population-based sample. *Obesity, 16*(7), 1529–1534.
- Holbrook, A. L., Green, M. C., & Krosnick, J. A. (2003). Telephone versus face-to-face interviewing of national probability samples with long questionnaires. Comparisons of respondents satisfying and social desirability response bias. *Public Opinion Quarterly, 67*, 79–125.
- Hughes, J. (2002). *Learning to smoke: Tobacco use in the west*. Chicago: Chicago University Press.
- Inglehart, R. (1997). *Modernization and postmodernization*. Princeton, NJ: Princeton University Press.
- Johnston, L. (1957). *The disease of tobacco smoking and its cure*. London: Christopher Johnson.
- Kish, L. (1949). A procedure for objective respondent selection within the household. *Journal of the American Statistical Association, 44*(247), 307–318.
- Klein, R. (1993). *Cigarettes are sublime 1993*. Durham: Duke University Press.
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology, 27*, 363–385.
- Lupton, D. (1995). *The imperative of health: Public health and the regulated body*. London: Sage.
- Markle, G., & Troyer, R. (1979). Smoke gets in your eyes: Cigarette smoking as deviant behavior. *Social Problems, 26*, 611–625.
- McElrath, K., & McEvoy, K. (2001). Heroin as evil: Ecstasy users’ perceptions about heroin. *Drugs: Education, Prevention and Policy, 8*(2), 177–189.
- Moskowitz, J. M. (2004). Assessment of cigarette smoking and smoking susceptibility among youth. Telephone computer-assisted self-interviews versus computer-assisted telephone interviews. *Public Opinion Quarterly, 68*(4), 565–587.
- Muxel, A. (Ed.). (2011). *La politique au fil de l’âge*. Paris: Presses de Sciences Po.
- Padioulet, J. G. (1977). La lutte contre le tabagisme, action politique et régulation étatique de la vie quotidienne. *Revue Française de Science Politique, 27*(6), 932–959 [in French].
- Parker, H., Alridge, J., & Measham, F. (1998). *Illegal leisure: The normalization of adolescent recreational drug use*. London: Routledge.
- Peretti-Watel, P. (2003). Heroin users as ‘folk devils’ and French public attitudes toward public health policy. *International Journal of Drug Policy, 14*(4), 321–329.
- Peretti-Watel, P., & Moatti, J. P. (2006). Understanding risk behaviours: How the sociology of deviance may contribute? The case of drug-taking. *Social Science & Medicine, 63*(3), 675–679.



- Peretti-Watel, P., Constance, J., Seror, V., & Beck, F. (2009). Cigarettes and social differentiation in France: Is tobacco use increasingly concentrated among the poor? *Addiction*, *104*(10), 1718–1728.
- Peretti-Watel, P., Seror, V., du Roscoät, E., & Beck, F. (2009). La prévention en question: Attitudes à l'égard de la santé, perceptions des messages préventifs et impact des campagnes. *Evolutions*, *18*, 1–6 [in French]. Available at: <http://www.inpes.sante.fr/CFESBases/catalogue/pdf/1242.pdf>
- Peretti-Watel, P. (2012). La cigarette du pauvre. *Rennes Editions de l'EHESP* [in French].
- Phelan, J. C., Link, B. G., & Dovidio, J. F. (2008). Stigma and prejudice: One animal or two? *Social Science & Medicine*, *67*(3), 358–367.
- Power, R., Power, T., & Gibson, N. (1996). Attitudes and experience of drug use amongst a group of London teenagers. *Drugs: Education, Prevention and Policy*, *3*(1), 71–80.
- Rozin, P., Markwith, M., & McCauley, C. (1994). Sensitivity to indirect contacts with other persons: AIDS aversion as a composite of aversion to strangers, infection, moral taint, and misfortune. *Journal of Abnormal Psychology*, *103*(3), 495–504.
- Schwartz, S. (2007). Basic human values: Theory, methods, and application. *Rivista Uomo*, *13*(2), 1–23.
- Schweigsuth, E. (2011). *Vote et âge. Effet de vieillissement ou de génération? (working paper) E-Prints CEE, Marsh.*
- Sikorski, C., Luppä, M., Kaisern, M., Glaesern, H., Schomerus, G., Könign, H. H., et al. (2011). The stigma of obesity in the general public and its implications for public health—A systematic review. *BMC Public Health*, *11*, 661.
- Silton, N. R., Flannelly, K. J., Milstein, G., & Vaaler, M. L. (2011). Stigma in America: Has anything changed? Impact of perceptions of mental illness and dangerousness on the desire for social distance: 1996 and 2006. *Journal of Nervous and Mental Disease*, *199*(6), 361–366.
- Stearns, P. (2002). *Fat history: Bodies and beauty in the modern west*. New York: New York University.
- Stuber, J., Galea, S., & Link, B. G. (2008). Smoking and the emergence of a stigmatized social status. *Social Science & Medicine*, *67*(3), 420–430.
- Stuber, J., Galea, S., & Link, B. G. (2009). Stigma and smoking: The consequences of our good intentions. *Social Service Review*, *83*(4), 585–609.
- WHO (World Health Organization). (2003). *Tobacco control country profiles*. Available at: [http://www.who.int/tobacco/global\\_data/country\\_profiles](http://www.who.int/tobacco/global_data/country_profiles)
- WHO. (2011). *WHO report on the global tobacco epidemic, 2011: Warning about the dangers of tobacco*. [http://www.who.int/tobacco/surveillance/policy/country\\_profile/en/index.html](http://www.who.int/tobacco/surveillance/policy/country_profile/en/index.html)