ORIGINAL ARTICLE

Quit interest, quit attempt and recent cigarette smoking cessation in the US working population, 2010

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ABSTRACT

Objectives To determine the prevalence of cigarette smoking cessation and examine the association between cessation and various factors among workers in a nationally representative sample of US adults.

Methods Data were derived from the 2010 National Health Interview Survey. Prevalence rates were calculated for interest in quitting smoking, making an attempt to quit smoking, and successful smoking cessation (defined as smokers who had quit for 6–12 months). Logistic regression analyses were used to identify factors associated with cessation after adjustment for demographic characteristics (age group, race/ethnicity, educational level and marital status).

Results Data were available for 17 524 adults who were employed in the 12 months prior to interview. The prevalence of quit interest, quit attempt and recent cessation was 65.2%, 53.8% and 6.8%, respectively. Quit interest was less likely among workers with long work hours, but more likely among workers with job insecurity, or frequent workplace skin and/or respiratory exposures. Quit attempt was more likely among workers with a hostile work environment but less likely among workers living in a home that permitted smoking or who smoked ≥11 cigarettes/day. Recent smoking cessation was less likely among workers with frequent exposure to others smoking at work or living in a home that permitted smoking, but more likely among workers with health insurance.

Conclusions Factors associated with cessation interest or attempt differed from those associated with successful cessation. Cessation success might be improved by reducing exposure to others smoking at work and home, and by improving access to health insurance.

INTRODUCTION

Cigarette smoking is an important preventable cause of death and disease.[1 2] Each year in the USA, smoking and exposure to secondhand tobacco smoke result in at least 443 000 premature deaths, approximately 5 million years of potential life lost and $97 billion in productivity losses.[3] According to the 2010 National Health Interview Survey (NHIS), an estimated 19.3% (45.3 million) of adults in the US general population were current cigarette smokers.[4] There was only a slight decline in the proportion of the population who smokes since 2005 (prevalence rate=20.9%)[4] and 2009 (prevalence rate=20.6%).[5] Smoking prevalence varies across the 50 states. The lowest rates are in Utah (9.1%) and California (12.1%),[4] suggesting that a national cigarette smoking rate of 12%, a goal of Healthy People 2020,[6] is achievable. Thus, despite the known health risks of smoking and benefits of quitting,[2] the US general population continues to experience high rates of smoking and associated smoking-related illnesses.[1 4]

In the US working population, there was a comparable overall age-adjusted smoking prevalence rate of 19.6% during 2004–2010.[7] Among workers, smoking is associated with increased absenteeism, sickness absence, occupational injuries and disabilities, and medical costs.[8–11] Smoking also increases the adverse health risks of some occupational exposures; for example, a 50-fold increase in risk of lung cancer has been reported among smokers who were exposed to asbestos compared with a fivefold increase among non-smokers exposed to asbestos.[12] In addition, the workplace is an important source of secondhand smoke exposure for non-smokers.[3 13]

The prevalence of smoking in the US adult working population varies across industry and occupation groups.[7] For example, by industry, the age-adjusted cigarette smoking prevalence ranged from 9.7% in education services to 30.0% in mining, and by occupation, from 8.7% in education, training and library to 31.4% in construction and extraction. Although these prevalence rates from 2004 to 2010[7] are lower compared with those from 1987 to 2004,[14] the rates in many industry and occupation groups remain stubbornly high. Given the need to reduce the relatively high smoking rates in the working population, we used data from the 2010 NHIS to determine the prevalence of cigarette smoking cessation (quit interest, quit attempt and recent cessation) among adult smokers (aged ≥18 years) in the US working population by demographic characteristics, work factors (organisation/psychosocial factors and potentially hazardous physical/chemical workplace exposures), environmental factors (frequent exposure to others smoking at work and living in a home that permitted smoking inside the home), number of cigarettes smoked per day and health insurance coverage, as well as occupation and industry. To our knowledge, this is the first published report that examines these factors in relation to the three smoking cessation outcomes among workers in a nationally representative sample of US adults.

METHODS

National Health Interview Survey

We used data from the 2010 NHIS, a nationally representative cross-sectional survey of the US

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civilian non-institutionalised population.[15] A multistage area-based probability sampling design was used with an oversampling of black, Hispanic and Asian persons. In 2010, occupational health supplement questions were imbedded into the sample adult questionnaire.

Demographic characteristics and health insurance coverage were obtained from the questions in the household and family modules. Information regarding employment status, industry and occupation of employment, cigarette smoking (including smoking status, quit attempt and cessation) and work factors was obtained from the sample adult module. Information on interest in quitting smoking (current smokers), cigarettes smoked per day (former smokers) and whether smoking was permitted inside the home was obtained from the cancer control supplement.

The 2010 NHIS was approved by the Research Ethics Review Board of the National Center for Health Statistics (protocol #2009-16) and the US Office of Management and Budget (control #0920-0214). Written consent for participation in the 2010 NHIS was not received, but instead all 2010 NHIS respondents provided oral consent prior to participation.

Study definitions

The definitions of the three cessation outcomes (quit interest, quit attempt and recent cessation) were consistent with those used by Healthy People 2020[6] and CDC.[16] Smoking status was first determined from the questions, "Have you smoked at least 100 cigarettes in your entire life?" and "Do you now smoke cigarettes every day, some days, or not at all?" Current smokers were those who had smoked at least 100 cigarettes during their lifetime and, at the time of the interview, reported smoking every day or some days. Former smokers were those who reported smoking at least 100 cigarettes during their lifetime but currently did not smoke. As illustrated in figure 1, cessation outcomes were defined as follows:

1. Quit interest: all current smokers who responded 'yes' to the question, "Would you like to completely stop smoking cigarettes?"
2. Quit attempt: the sum of current smokers who have smoked ≥2 years and responded 'yes' to the question, "During the past 12 months, have you stopped smoking for more than 1 day because you were trying to quit smoking?" and former smokers who quit within the past year based on the

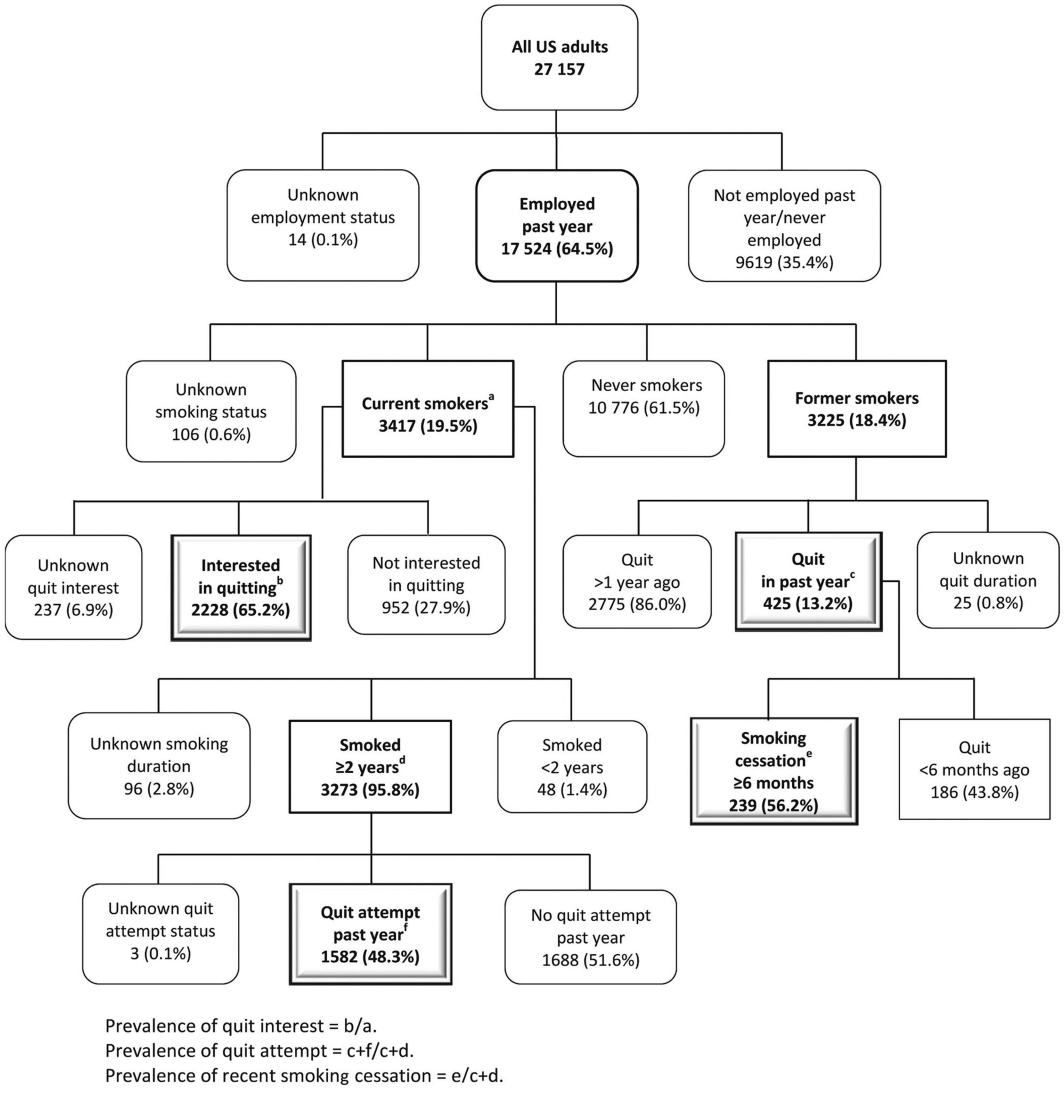

Figure 1 Cigarette smoking quit interest, quit attempt and recent cessation among those who worked in the past year (National Health Interview Survey, US, 2010).

question, "How long has it been since you quit smoking cigarettes?"

3. Recent cessation: all former smokers who quit within the past year and had not smoked for ≥6 months.

In rate calculations, the denominator for quit interest includes all current smokers. For quit attempt and recent cessation, the denominator includes all current smokers who have smoked ≥2 years and former smokers who quit within the past year. We excluded current smokers with unknown or <2 years duration so that only smokers with an established pattern of smoking were included, that is, those who initiated smoking at least 2 years before interview. However, results were similar even when all current smokers were included in the denominator for quit attempt and recent cessation.

Demographic characteristics that were assessed included sex, age group, race/ethnicity, educational level, marital status and geographic region of residence (northeast, midwest, south and west). Analysis by educational level was limited to workers aged ≥25 years. No health insurance coverage was defined as those who answered 'no coverage of any type' to the question, "What kind of health insurance or healthcare coverage do you have?" Industry (employer's type of business) and occupation (employee's type of work) for the main job held in the 12 months preceding the interview were assigned four-digit industry and occupation codes based on the 2007 North American Industrial Classification System and 2010 Standard Occupational Classification system. To allow for more reliable estimates, we used less detailed two-digit industry and occupation (I&O) recodes. The industry recodes include 21 simple categories, and the occupation recodes include 23 simple categories.

We examined the following work organisation factors: long work hours, non-standard work arrangements and alternative shifts. Long work hours were defined as having worked ≥48 vs <48 h in the week preceding interview. Work schedule or shift work was used to describe the shift usually worked within the past 12 months and was categorised as regular daytime schedule, regular evening shift, regular night shift, rotating shift or some other schedule. Work arrangement for the main job held in the 12 months preceding the interview was dichotomised as standard (regular permanent) and non-standard, and non-standard was further stratified into the following categories: independent contractor, independent consultant or freelance worker, on-call or worked only when called to work, paid by a temporary agency, worked for a contractor who provides workers and services to others under contract, and other.

The work-related psychosocial factors included were job insecurity, work–family imbalance and hostile work environment. Responses of 'strongly agree' and 'agree' to the question, "I am worried about becoming unemployed", were defined as job insecurity, whereas responses of 'strongly disagree' and 'disagree' to the question, "It is easy for me to combine work with family responsibilities", were defined as work–family imbalance. Hostile work environment was defined as those who answered 'yes' to the question, "During the past 12 months were you threatened, bullied or harassed by anyone while you were on the job?"

For the potentially hazardous physical/chemical workplace exposures, we examined frequent occupational skin contact with chemicals; frequent outdoor work; and frequent exposure to vapours, gas, dust or fumes. The first two of these measures were based on 'regularly' being exposed during the past 12 months at the respondent's current or most recent job; the last of these was based on being 'regularly' exposed at the respondent's longest-held job. Because frequent occupational skin contact with chemicals was correlated with frequent exposure to vapours, gas, dust or fumes at work, workers were stratified into two categories: those who had one or both exposures (ie, frequent workplace skin and/or respiratory exposures) and those who had neither exposure.

Smoking in the workplace was based on the question, "During the past 12 months, were you regularly exposed to tobacco smoke from other people at work twice a week or more?", and smoking in the home was based on the question, "In a usual week, does anyone who lives here, including yourself, smoke cigarettes, cigars or pipes anywhere inside this home?" Those who answered 'yes' were defined as frequently exposed to others smoking at work and living in a home that permitted smoking, respectively.

Smoking intensity was assessed from the following questions: "When you last smoked fairly regularly, how many cigarettes did you usually smoke per day?" (former smokers); "On how many of the past 30 days did you smoke a cigarette?" and "On the average, when you smoked during the past 30 days, about how many cigarettes did you smoke a day?" (current someday smokers); and "On the average, how many cigarettes do you now smoke a day?" (current daily smokers). Based on the distributions of all smokers, the number of cigarettes smoked per day was categorised as <1–5, 6–10 and ≥11.

Statistical analyses

All analyses were conducted using SAS V.9.3 (SAS Institute Inc, Cary, North Carolina, USA) and SAS-callable SUDAAN V.11.0 (Research Triangle Institute, Research Triangle Park, North Carolina, USA) to account for the survey's complex sampling design. To represent the US civilian, non-institutionalised population aged ≥18 years, all estimates were weighted using the NHIS sample adult weights.[15] We calculated prevalence estimates (%) and 95% CIs for each of the smoking cessation outcomes (quit interest, quit attempt and recent cessation) overall and stratified by demographic characteristics, work factors, environmental factors, number of cigarettes smoked per day, health insurance coverage, occupation and industry. Wald χ^2 tests were used to assess whether the prevalence for each outcome varied across the categories. Estimates with a relative SE (RSE) >30% but ≤50% are noted in the tables as they do not meet the NCHS standards of reliability/precision. Estimates with a RSE >50% or based on cell sizes with <10 cases are not reported.

Logistic regression analysis was used to examine the relationship between each smoking cessation outcome (as the dependent variable) and each of the following independent variables: demographic characteristics, work factors, environmental factors, number of cigarettes smoked per day, health insurance coverage, occupation and industry. Simple logistic regression was first performed to assess the relationship between each outcome and each independent variable. A multivariate logistic regression model was fitted for each outcome and included the demographic characteristics of age group, race/ethnicity, educational level and marital status along with all other factors that had $p<0.1$ in the univariate analysis (full model). A stepwise procedure was next used to identify the significant factors in the final model for each outcome. Because results of the full and final models are similar, only the latter results are presented. The models were assessed using the goodness-of-fit test of Hosmer and Lemeshow. Results are reported using ORs and their 95% CI. A $p<0.05$ from the Wald test is considered statistically significant.

RESULTS

The distributions of smoking status and the three cessation outcomes in the study sample are provided in figure 1. Of the 27 157 sample adults in the 2010 NHIS, 17 524 (64.5%) were currently employed or employed at some time in the 12 months prior to the interview (hereafter referred to as current/recent workers) and were included in this study. Among current/recent workers, there were a total of 3417 current smokers (19.5%) and 3225 former smokers (18.4%). Of the current smokers, 3273 (95.8%) had smoked for ≥2 years. Among former smokers, 425 (13.2%) had quit in the past 12 months, and of these, 186 (43.8%) quit <6 months ago and 239 (56.2%) quit for ≥6 months (hereafter referred to as recent smoking cessation).

Prevalence of quit interest, quit attempt and recent cessation

Table 1 presents the prevalence of smoking cessation outcomes among current/recent workers by demographic characteristics and other factors. The overall prevalence of quit interest among current smokers was 65.2%. The prevalence of quit interest was lower among those aged ≥65 years compared with those in all other age groups and differed by race/ethnicity. The prevalence of quit interest was higher for those with job insecurity compared with those without it (69.4% vs 62.6%); for those who had frequent workplace skin and/or respiratory exposures compared with those who did not (69.5% vs 61.9%); and for those with frequent exposure to others smoking at work (67.0% vs 63.4%) and living in a home that permitted smoking (71.9% vs 67.9%) compared with those who did not have these exposures.

The overall prevalence of quit attempt among current smokers who smoked ≥2 years and former smokers who quit within the past year was 53.8% (table 1). The quit attempt prevalence decreased with increasing age and varied by race/ethnicity, educational level and marital status. Independent contractors (45.9%) had a lower prevalence compared with workers with the following work arrangements: standard or regular permanent (54.2%), on-call (59.9%) or employed by temporary agencies (69.8%) or contracting companies (63.8%). Workers employed by temporary agencies also had a higher prevalence compared with workers with other arrangement (ie, work arrangement not captured by any of the previously listed categories; 50.7%). The prevalence was higher for workers who had work–family imbalance compared with those who did not (59.3% vs 52.7%), as well as for those who were threatened, bullied or harassed by anyone on the job compared with those who were not (63.3% vs 52.6%), but was lower for those living in a home that permitted smoking compared with those who did not have this exposure (44.4% vs 59.0%). In addition, the prevalence decreased with increasing numbers of cigarettes smoked per day (63.0%, 56.4% and 44.0% for <1–5, 6–10 and ≥11 cigarettes/day, respectively).

The overall prevalence of recent smoking cessation among current smokers who smoked ≥2 years and former smokers who quit within the past year was 6.8% (table 1). Cessation prevalence varied with the following demographic characteristics: age group, race/ethnicity, educational level, marital status and geographic region of residence. The prevalence was lower for those with frequent exposure to others smoking at work (3.6% vs 8.4%) or were living in a home that permitted smoking (1.9% vs 9.1%) compared with those who did not have these exposures. The prevalence was also lower among those who smoked ≥11 (4.3%) compared with 6–10 (6.9%) or <1–5 (7.1%) cigarettes/day.

Multivariate logistic regression analyses

Table 2 presents the results of the stepwise multivariate logistic regression analysis for each cessation outcome, adjusted for demographic characteristics (age group, race/ethnicity, educational level and marital status). For quit interest, the factors entered in the model were long work hours, job insecurity, hostile work environment, frequent workplace skin and/or respiratory exposures, frequent exposure to others smoking at work, living in a home that permitted smoking and number of cigarettes smoked per day ($p<0.1$ in univariate analysis). In the final model (table 2), those who worked for ≥48 h (OR=0.78; 95% CI 0.63 to 0.96) compared with those who worked <48 h per week were less likely to be interested in quitting smoking, whereas those with job insecurity (OR=1.30; 95% CI 1.09 to 1.55) compared with those who did not were more likely to be interested in quitting smoking. In addition, those who had frequent workplace skin and/or respiratory exposures (OR=1.42; 95% CI 1.19 to 1.69) compared with those who did not were more likely to be interested in quitting smoking.

The factors entered in the model for quit attempt were occupation, work schedule, work arrangement, job insecurity, work–family imbalance, hostile work environment, frequently work outdoors, living in a home that permitted smoking and number of cigarettes smoked per day ($p<0.1$ in univariate analysis). As shown in the final model (table 2), the likelihood of quit attempt was higher for those who experienced a hostile work environment (OR=1.54; 95% CI 1.17 to 2.04) compared with those who had not, but was lower among those living in a home that permitted smoking (OR=0.67; 95% CI 0.55 to 0.80) compared with those who did not. In addition, the likelihood of quit attempt was decreased among those who smoked ≥11 compared with <1–5 cigarettes/day (OR=0.58; 95% CI 0.47 to 0.72).

For recent cessation, the factors entered in the model were region, frequent exposure to others smoking at work, living in a home that permitted smoking, number of cigarettes smoked per day and health insurance coverage ($p<0.1$ in univariate analysis). As shown in the final model (table 2), the likelihood of recent cessation was lower for those with exposure to others smoking at work (OR=0.52; 95% CI 0.34 to 0.80) and living in a home that permitted smoking (OR=0.27; 95% CI 0.15 to 0.48) compared with those without these exposures, but was higher for those with health insurance (OR=1.94; 95% CI 1.32 to 2.85) compared with those without it.

Analyses by industry and occupation

The prevalence of quit interest and attempt by I&O groups is shown in table 3. Due to small sample sizes within many I&O groups, recent smoking cessation prevalence by I&O was not assessed. The prevalence of quit interest was highest in the finance and insurance (75.7%), information (71.5%) and transportation and warehousing (70.4%) industries. As for quit attempt, the prevalence was highest for the finance and insurance (64.4%), administrative and support and waste management and remedial services (61.2%), wholesale trade (60.8%) and mining (60.6%) industries. Among occupation groups, the highest prevalence of quit interest was observed for the legal (74.7%), life, physical and social science (71.7%), and installation, maintenance and repair (71.5%) occupations. For quit attempt, the highest prevalence was for the community and social services (74.8%), legal (66.9%) and healthcare support (60.1%) occupations.

In the multivariate logistic regression analyses (table 3), compared with all other industry groups combined as the reference

Table 1 Weighted prevalence of quit interest, quit attempt and recent cessation among adult cigarette smokers who worked in the past 12 months, by demographic characteristics, work factors, number of cigarettes smoked per day and environmental factors (National Health Interview Survey, US, 2010)

	Quit interest*			Quit attempt†			Recent cessation‡		
Factor	No. of smokers§	% (95% CI)	p Value¶	No. of smokers	% (95% CI)	p Value	No. of smokers	% (95% CI)	p Value
Total	2228	65.2 (63.4 to 67.0)		2007	53.8 (51.8 to 55.9)		239	6.8 (5.8 to 7.8)	
Sex			NS			NS			NS
Male	1166	64.3 (61.8 to 66.8)		1060	53.4 (50.5 to 56.3)		122	6.6 (5.2 to 7.9)	
Female	1062	66.4 (63.7 to 69.1)		947	54.4 (51.6 to 57.2)		117	7.0 (5.5 to 8.6)	
Age group (years)			0.023			0.001			0.006
18–29	554	65.5 (62.0 to 69.0)		605	63.0 (59.2 to 66.8)		88	9.1 (7.0 to 11.2)	
30–44	789	67.7 (64.6 to 70.8)		731	57.4 (54.2 to 60.6)		82	7.0 (5.2 to 8.7)	
45–64	830	63.8 (60.7 to 67.0)		630	44.5 (41.1 to 47.8)		62	4.8 (3.4 to 6.2)	
≥65	55	49.9 (39.6 to 60.1)		41	37.8 (27.1 to 48.6)		7	5.8 (1.3 to 10.3)††	
Race/ethnicity			0.016			0.048			0.005
White, non-Hispanic	1467	65.7 (63.5 to 67.9)		1277	52.4 (50.0 to 54.9)		153	6.3 (5.1 to 7.5)	
Black, non-Hispanic	349	70.7 (65.9 to 75.5)		301	60.0 (54.7 to 65.4)		19	3.8 (1.9 to 5.7)	
Asian, non-Hispanic	80	61.7 (51.3 to 72.1)		65	50.4 (40.0 to 60.8)		11	9.7 (3.6 to 15.9)††	
Other, non-Hispanic	57	59.2 (48.2 to 70.3)		62	59.6 (47.9 to 71.3)		11	14.0 (5.3 to 22.7)††	
Hispanic	275	57.8 (52.2 to 63.4)		302	58.0 (53.0 to 63.0)		45	10.4 (6.6 to 14.3)	
Education			NS			0.001			0.001
<HS diploma	290	64.9 (59.8 to 69.9)		232	47.9 (42.7 to 53.1)		18	3.8 (1.7 to 5.8)	
HS/GED diploma	657	63.0 (59.5 to 66.4)		537	47.6 (43.9 to 51.2)		48	4.6 (3.0 to 6.2)	
Some college	706	68.0 (64.8 to 71.2)		635	55.2 (51.6 to 58.8)		77	7.1 (5.2 to 8.9)	
≥BA/BS degree	331	66.5 (62.0 to 70.9)		315	56.3 (51.5 to 61.1)		53	10.8 (7.7 to 14.0)	
Marital status			NS			0.046			0.002
Married	754	66.0 (63.1 to 68.8)		668	52.3 (49.2 to 55.4)		95	8.0 (6.1 to 9.8)	
Widowed	71	65.8 (55.4 to 76.2)		51	46.1 (36.1 to 56.1)		2	‡‡	
Divorced or separated	487	66.5 (62.8 to 70.1)		408	50.5 (46.2 to 54.9)		34	4.0 (2.4 to 5.5)	
Never married	642	63.3 (59.5 to 67.1)		639	58.2 (54.3 to 62.0)		83	7.4 (5.6 to 9.2)	
Living with partner	270	64.7 (59.8 to 69.6)		237	55.2 (50.0 to 60.4)		25	5.7 (3.4 to 7.9)	
Region			NS			NS			0.016
Northeast	330	69.2 (64.1 to 74.2)		302	56.4 (51.5 to 61.4)		34	7.6 (4.7 to 10.4)	
Midwest	578	64.5 (61.1 to 68.0)		511	52.8 (49.0 to 56.6)		46	4.7 (2.9 to 6.5)	
South	879	64.5 (61.5 to 67.5)		763	52.4 (49.0 to 55.9)		86	6.3 (4.8 to 7.8)	
West	441	64.4 (60.8 to 68.0)		431	55.7 (51.1 to 60.3)		73	9.7 (7.2 to 12.1)	
Occupation			NS			NS			NS
White collar	1035	66.5 (63.9 to 69.1)		924	53.7 (50.8 to 56.5)		126	7.6 (6.0 to 9.2)	
Service	529	62.6 (58.8 to 66.4)		515	57.5 (53.4 to 61.7)		50	6.1 (4.1 to 8.1)	
Farm and blue collar	644	66.0 (62.6 to 69.3)		548	51.1 (47.4 to 54.8)		58	5.9 (4.3 to 7.6)	
Work organisation									
Weekly work hours§§			NS			NS			NS
<48	1550	65.7 (63.5 to 67.9)		1376	53.0 (50.4 to 55.5)		179	7.2 (6.0 to 8.5)	
≥48	360	61.9 (57.3 to 66.4)		342	55.4 (51.2 to 59.7)		34	6.2 (4.1 to 8.2)	
Work schedule			NS			NS			NS
Day shift	1489	65.0 (62.8 to 67.2)		1311	52.4 (50.0 to 54.8)		165	7.0 (5.8 to 8.3)	
Evening shift	165	70.7 (64.4 to 77.1)		149	58.7 (51.4 to 65.9)		10	4.3 (1.4 to 7.1)	
Night shift	108	65.0 (56.7 to 73.3)		116	63.9 (55.6 to 72.2)		15	9.2 (4.4 to 14.0)	
Rotating shift	242	64.2 (58.7 to 69.6)		233	56.5 (50.7 to 62.4)		26	6.2 (3.5 to 8.8)	
Other	223	64.2 (57.6 to 70.7)		197	52.8 (46.9 to 58.7)		22	6.1 (3.1 to 9.0)	
Work arrangement			NS			NS			NS
Standard	1790	65.2 (63.2 to 67.1)		1626	54.2 (52.0 to 56.4)		203	7.2 (6.0 to 8.3)	
Non-standard	436	65.5 (61.2 to 70.0)		379	52.3 (48.1 to 56.5)		35	4.9 (2.7 to 7.0)	
Work arrangement			NS			0.007			
Regular permanent	1790	65.2 (63.2 to 67.1)		1626	54.2 (52.0 to 56.4)			–	
Independent contractor	218	66.5 (60.3 to 72.7)		174	45.9 (40.0 to 51.7)			–	
On-call	65	64.6 (54.0 to 75.2)		63	59.9 (49.0 to 70.8)			–	
Temporary agency	41	70.5 (58.9 to 82.1)		39	69.8 (57.4 to 82.3)			–	
Contracting company	47	71.9 (56.5 to 87.4)		43	63.8 (50.1 to 77.5)			–	
Other	65	57.5 (46.7 to 68.2)		60	50.7 (39.4 to 62.0)			–	

Continued

Table 1 Continued

Factor	Quit interest*			Quit attempt†			Recent cessation‡		
	No. of smokers§	% (95% CI)	p Value¶	No. of smokers	% (95% CI)	p Value	No. of smokers	% (95% CI)	p Value
Psychosocial factors									
Job insecurity			0.001			NS			NS
No	1256	62.6 (60.2 to 65.0)		1153	52.4 (49.8 to 55.1)		148	7.1 (5.7 to 8.4)	
Yes	967	69.4 (66.8 to 72.1)		846	55.8 (52.7 to 59.0)		87	6.2 (4.6 to 7.7)	
Work–family imbalance			NS			0.013			NS
No	1824	65.4 (63.3 to 67.5)		1609	52.7 (50.4 to 55.0)		198	6.8 (5.7 to 7.9)	
Yes	396	65.5 (61.0 to 69.9)		389	59.3 (54.8 to 63.8)		38	6.3 (4.2 to 8.5)	
Hostile work environment			NS			0.001			NS
No	1969	64.7 (62.8 to 66.7)		1754	52.6 (50.5 to 54.8)		215	6.9 (5.9 to 8.0)	
Yes	253	69.9 (64.7 to 75.2)		246	63.3 (57.3 to 69.2)		24	5.5 (3.1 to 7.8)	
Potentially hazardous physical/chemical workplace exposures									
Frequent workplace skin and/or respiratory exposures			0.001			NS			NS
No	1206	61.9 (59.5 to 64.3)		1089	52.9 (50.1 to 55.7)		143	7.3 (5.9 to 8.7)	
Yes	1018	69.5 (66.9 to 72.2)		916	55.1 (52.2 to 58.0)		96	6.2 (4.8 to 7.5)	
Frequently work outdoors			NS			NS			NS
No	1560	65.4 (63.2 to 67.6)		1427	55.0 (52.8 to 57.3)		175	7.2 (5.9 to 8.5)	
Yes	668	65.0 (61.5 to 68.5)		580	51.3 (47.5 to 55.1)		64	5.8 (4.3 to 7.4)	
Frequent exposure to others smoking at work			0.004			NS			0.001
No	1439	63.4 (61.2 to 65.6)		1369	54.4 (52.0 to 56.8)		195	8.4 (6.9 to 9.8)	
Yes	789	67.0 (66.0 to 72.0)		638	53.0 (49.2 to 56.7)		44	3.6 (2.4 to 4.8)	
Living in a home that permitted smoking			0.028			0.001			0.001
No	1313	67.9 (65.6 to 70.2)		1315	59.0 (56.4 to 61.5)		202	9.1 (7.7 to 10.6)	
Yes	913	71.9 (69.1 to 74.7)		573	44.4 (40.9 to 47.9)		17	1.9 (0.9 to 3.0)	
No. of cigarettes smoked per day			NS			0.001			0.011
<1–5	706	62.4 (59.2 to 65.6)		734	63.0 (59.5 to 66.5)		78	7.1 (5.4 to 8.9)	
6–10	644	68.0 (64.3 to 71.7)		587	56.4 (52.7 to 60.0)		64	6.9 (5.0 to 8.9)	
≥11	870	65.6 (62.6 to 68.7)		631	44.0 (41.0 to 47.0)		63	4.3 (3.0 to 5.5)	
Health insurance			NS			NS			0.001
No	715	66.0 (62.7 to 69.4)		601	52.0 (48.6 to 55.4)		46	3.8 (2.5 to 5.1)	
Yes	1509	65.1 (62.9 to 67.2)		1397	54.6 (52.2 to 56.9)		189	7.9 (6.7 to 9.1)	

*Quit interest: numerator includes current smokers interested in quitting (n=2228), representing approximately 19.8 million US civilian non-institutionalised adults; denominator includes all current smokers (n=3417).
†Quit attempt: numerator includes current smokers who have smoked ≥2 years and attempted to quit in past year (n=1582) and former smokers who quit within the past year (n=425), representing approximately 17.7 million US civilian non-institutionalised adults; denominator includes former smokers who quit within the past year (n=425) and current smokers who have smoked ≥2 years (n=3273).
‡Recent cessation: numerator includes former smokers who quit within the past year and had not smoked for ≥6 months (n=239), representing approximately 2.2 million US civilian non-institutionalised adults; denominator includes current smokers who have smoked ≥2 years (n=3273) and former smokers who quit within the past year (n=425).
§Unweighted.
¶p Value for Wald χ^2 test.
††These estimates have a relative SE >30% and ≤50% and should be interpreted with caution as they do not meet standards of reliability/precision.
‡‡Estimates with a relative SE >50% are not shown as they do not meet standards of reliability/precision.
§§Analysis restricted to currently employed workers.
HS, high school; GED, general educational development; NS, not statistically significant, p>0.05.

group, quit interest was higher among workers employed in finance and insurance (OR=2.13; 95% CI 1.27 to 3.59) and lower among those employed in administrative and support and waste management and remedial services industries (OR=0.63; 95% CI 0.44 to 0.90). When compared with all other occupation groups combined, the likelihood of quit interest was higher for workers in the office and administrative support occupations (OR=1.40; 95% CI 1.04 to 1.88). As for quit attempt, the likelihood was higher among workers employed in wholesale trade (OR=1.74; 95% CI 1.03 to 2.93), finance and insurance (OR=1.55; 95% CI 1.03 to 2.34) and administrative and support and waste management and remedial services industries (OR=1.42; 95% CI 1.01 to 1.99), as well as among workers in the community and social services occupations (OR=2.57; 95% CI 1.24 to 5.30).

DISCUSSION

To our knowledge, this is the first study to estimate the prevalence of quit interest, quit attempt and recent smoking cessation among workers from all industry and occupation categories in a nationally representative sample of US adults. Most previous studies of cigarette smoking cessation outcomes have been based on general population samples (including non-workers), limited to participants of smoking cessation programmes or limited to

Table 2 Results of multivariate logistic regression analysis relating various non-demographic factors to quit interest, quit attempt and recent cessation among adult cigarette smokers who worked in the past 12 months (National Health Interview Survey, US, 2010)*

	OR (95% CI)		
Factor	**Quit interest†**	**Quit attempt‡**	**Recent cessation§**
Weekly work hours¶			
<48	Ref.	–	–
≥48	0.78 (0.63 to 0.96)	–	–
Job insecurity			
No	Ref.	–	–
Yes	1.30 (1.09 to 1.55)	–	–
Hostile work environment			
No	–	Ref.	–
Yes	–	1.54 (1.17 to 2.04)	–
Frequent workplace skin and/or respiratory exposures			
No	Ref.	–	–
Yes	1.42 (1.19 to 1.69)	–	–
Frequent exposure to others smoking at work			
No	–	–	Ref.
Yes	–	–	0.52 (0.34 to 0.80)
Living in a home that permitted smoking			
No	–	Ref.	Ref.
Yes	–	0.67 (0.55 to 0.80)	0.27 (0.15 to 0.48)
No. of cigarettes smoked per day			
<1–5	–	Ref.	–
6–10	–	0.82 (0.65 to 1.03)	–
≥11	–	0.58 (0.47 to 0.72)	–
Health insurance			
No	–	–	Ref
Yes	–	–	1.94 (1.32 to 2.85)

*Weighted estimates. Factors in the final multivariate model for each outcome, adjusted for demographic characteristics (age group, education, race/ethnicity and marital status) and for all the listed significant factors (p<0.05) specific to that outcome.
†Quit interest: numerator includes current smokers interested in quitting (n=2228); denominator includes all current smokers (n=3417).
‡Quit attempt: numerator includes current smokers who have smoked ≥2 years and attempted to quit in past year (n=1582) and former smokers who quit within the past year (n=425); denominator includes former smokers who quit within the past year (n=425) and current smokers who have smoked ≥2 years (n=3273).
§Recent cessation: numerator includes former smokers who quit within the past year and had not smoked for ≥6 months (n=239); denominator includes current smokers who have smoked ≥2 years (n=3273) and former smokers who quit within the past year (n=425).
¶Analysis restricted to currently employed workers.

selected occupational groups[17 18] with limited generalisability of the findings. It is interesting to note that our 2010 prevalence estimates for the US working population were comparable to those reported in the general population[16]: quit interest (65.2% in the working population vs 68.8% in the general population), quit attempt (53.8% vs 52.4%) and recent cessation (6.8% vs 6.2%). Similar to the general population, the prevalence of cessation among workers decreased with increasing age, rose with increasing educational level and varied by race/ethnicity but not by sex. However, in the working population, there was a higher prevalence of recent cessation among those who were married compared with other categories of marital status.

We found that the factors significantly associated with quit interest or quit attempt among workers differed from those associated with recent cessation. These associations remained after the adjustment for demographic characteristics and other factors. This is not completely surprising because the path from quit interest to successful cessation is difficult and influenced by a multitude of factors (including psychosocial, biological, behavioural and social factors).[19 20]

The importance of the work setting in influencing smoking habits and facilitating smoking cessation is well recognised.[17 21] Several studies have suggested an association between reduced smoking cessation success and organisational work factors (eg, high number of work hours per week, alternative shift work and high physical workload) and adverse psychosocial work conditions (eg, high job demand, and low control and social support).[17 22–24] The effect of specific work factors on smoking cessation is complex and may depend on other contributing factors.[17 22] In addition, as the workplace is a major source of stress, many smoking workers consume cigarettes for their perceived stress-reducing properties and for their role in improving performance under stress.[21] Such issues may need to be addressed in workplace smoking cessation programmes.

Few studies have examined the relationship between workplace chemical/physical hazardous exposures and smoking cessation. Sorensen *et al*[25] reported that Massachusetts smokers exposed to workplace chemical hazards, compared with unexposed workers, were significantly more likely to have quit interest. That study did not examine quit attempts or quit success. Chin *et al*[26] examined smoking cessation of 6 months duration among Massachusetts construction workers but did not find an association with dust or chemical exposure. However, the study was limited by small sample size (ie, 39 (8%) of the participating smokers quit for 6 months). Our study found that those with frequent workplace skin and/or respiratory exposures compared with those with neither exposure were more likely to be interested in quitting smoking. A possible explanation could be that those with hazardous workplace exposures were concerned that those exposures combined with smoking may magnify their chronic disease risk and, as such, were interested in reducing the exposure (ie, smoking) over which they have greater control.[25 26] Therefore, concerns with workplace hazardous exposures should be incorporated into intervention programmes to promote smoking cessation.

Our study found that smoking cessation was affected by frequent exposure to others smoking at work or living in a home that permitted smoking. Both types of exposure were associated with lower likelihood of recent smoking cessation, and smoking permitted inside the home was associated with a lower likelihood of quit attempt. These findings are consistent with those of Kahende *et al*[27] and Fiore *et al*[28], who found that smokers who lived in smoke-free homes were more likely to make a quit attempt than those who lived in homes where smoking was permitted. Other studies have also shown that smoking cessation is less likely when in daily contact with other smokers,[29] and this lowered likelihood is associated with the number of smokers in the household.[30] In contrast, smoking cessation is more likely in the absence of other smokers in the household,[31] or when living in a smoke-free home.[32] Furthermore, workplace smoke-free policies[33 34] were found to reduce cigarette smoking during working hours, and these reductions occasionally led to successful cessation. A non-smoking environment appears to increase the likelihood of smoking cessation and facilitates its maintenance.[35]

Nicotine, the psychoactive chemical in tobacco, is strongly addictive. Several studies have shown an inverse association between smoking intensity (ie, number of cigarettes smoked per day) and smoking cessation.[26 31 35–37] Genetic risk may be an important factor associated with the progression to heavy smoking, persistence in heavy smoking, reliance on smoking to cope with stress and the greater likelihood of failure in cessation

Table 3 Weighted prevalence (%) of quit interest and quit attempt and results of multivariate logistic regression analysis among US adult cigarette smokers who worked in the past 12 months, by industry and occupation (National Health Interview Survey, US, 2010)

	Quit interest*			Quit attempt†		
Industry	No. of smokers‡	Unadjusted prevalence % (95% CI)	Adjusted OR (95% CI)§	No. of smokers	Unadjusted prevalence % (95% CI)	Adjusted OR (95% CI)¶
Agriculture, forestry, fishing and hunting industries (11)	24	55.8 (37.5 to 74.2)	0.64 (0.29 to 1.43)	26	46.7 (31.5 to 61.8)	0.72 (0.35 to 1.48)
Mining industries (21)	12	66.7 (46.4 to 87.0)	1.01 (0.39 to 2.64)	13	60.6 (37.4 to 83.8)	1.53 (0.65 to 3.61)
Utilities industries (22)	17	60.3 (40.7 to 79.9)	1.07 (0.44 to 2.57)	18	53.9 (34.4 to 73.5)	0.90 (0.38 to 2.14)
Construction industries (23)	215	66.7 (60.8 to 72.5)	1.04 (0.76 to 1.41)	181	50.4 (44.2 to 56.6)	0.96 (0.72 to 1.27)
Manufacturing industries (31–33)	202	61.2 (55.3 to 67.1)	0.80 (0.59 to 1.08)	175	46.8 (40.9 to 52.7)	0.79 (0.62 to 1.01)
Wholesale trade industries (42)	58	65.5 (53.6 to 77.4)	1.06 (0.60 to 1.86)	56	60.8 (49.2 to 72.4)	1.74 (1.03 to 2.93)**
Retail trade industries (44–45)	275	68.8 (63.2 to 74.5)	1.14 (0.85 to 1.51)	229	53.5 (47.8 to 59.2)	0.92 (0.70 to 1.20)
Transportation and warehousing industries (48–49)	105	70.4 (62.4 to 78.5)	1.45 (0.90 to 2.33)	83	46.5 (37.3 to 55.7)	0.83 (0.57 to 1.20)
Information industries (51)	52	71.5 (60.7 to 82.4)	1.42 (0.77 to 2.61)	45	58.4 (46.3 to 70.5)	1.29 (0.74 to 2.26)
Finance and insurance industries (52)	89	75.7 (67.6 to 83.8)	2.13 (1.27 to 3.59)**	83	64.4 (55.6 to 73.3)	1.55 (1.03 to 2.34)**
Real estate and rental and leasing industries (53)	45	58.3 (44.8 to 71.7)	0.76 (0.40 to 1.47)	39	44.8 (32.3 to 57.4)	0.59 (0.34 to 1.03)
Professional, scientific and technical services industries (54)	110	67.0 (58.7 to 75.3)	0.91 (0.60 to 1.38)	92	50.2 (41.1 to 59.2)	0.83 (0.55 to 1.25)
Management of companies and enterprises industries (55)	1	††	††	0	‡‡	‡‡
Administrative and support and waste management and remediation services industries (56)	132	57.5 (49.9 to 65.1)	0.63 (0.44 to 0.90)**	137	61.2 (53.9 to 68.6)	1.42 (1.01 to 1.99)**
Education services industries (61)	102	59.5 (50.5 to 68.4)	0.78 (0.51 to 1.19)	102	54.5 (45.4 to 63.7)	1.27 (0.82 to 1.96)
Healthcare and social assistance industries (62)	270	63.7 (57.7 to 69.6)	0.95 (0.70 to 1.28)	243	56.5 (51.0 to 62.0)	1.04 (0.80 to 1.36)
Arts, entertainment and recreation industries (71)	58	63.8 (52.7 to 74.9)	0.84 (0.49 to 1.44)	49	48.3 (35.8 to 60.8)	0.80 (0.47 to 1.35)
Accommodation and food services industries (72)	228	64.3 (58.2 to 70.4)	1.05 (0.78 to 1.41)	224	57.7 (51.4 to 64.1)	0.93 (0.68 to 1.27)
Other services (except public administration) industries (81)	121	74.6 (66.5 to 82.8)	1.48 (0.93 to 2.36)	107	57.0 (48.7 to 65.1)	1.24 (0.86 to 1.78)
Public administration industries (92)	94	67.0 (58.7 to 75.3)	1.01 (0.67 to 1.54)	88	53.5 (44.7 to 62.2)	0.94 (0.65 to 1.38)

	Quit interest*			Quit attempt†		
Occupation	No. of smokers‡	Unadjusted prevalence % (95% CI)	Adjusted OR (95% CI)§	No. of smokers	Unadjusted prevalence % (95% CI)	Adjusted OR (95% CI)¶
Management occupations (11)	130	63.6 (55.9 to 71.4)	1.00 (0.68 to 1.47)	110	48.8 (41.1 to 56.4)	0.80 (0.57 to 1.12)
Business and financial operations occupations (13)	77	62.4 (52.2 to 72.7)	0.88 (0.53 to 1.48)	67	54.4 (43.0 to 65.9)	1.13 (0.70 to 1.83)
Computer and mathematical occupations (15)	41	67.8 (53.8 to 81.8)	1.23 (0.60 to 2.49)	33	54.2 (40.3 to 68.1)	0.90 (0.49 to 1.67)
Architecture and engineering occupations (17)	26	65.0 (48.6 to 81.4)	0.76 (0.35 to 1.68)	24	47.1 (31.1 to 63.2)	0.74 (0.39 to 1.42)
Life, physical and social science occupations (19)	8	71.7 (36.6 to 100.0)	1.61 (0.29 to 9.04)	7	45.4 (18.4 to 72.4)§§	1.06 (0.35 to 3.20)
Community and social services occupations (21)	25	60.8 (43.0 to 78.5)	0.73 (0.34 to 1.55)	31	74.8 (60.8 to 88.8)	2.57 (1.24 to 5.30)**
Legal occupations (23)	20	74.7 (57.9 to 91.5)	1.58 (0.60 to 4.13)	21	66.9 (50.2 to 83.6)	1.38 (0.58 to 3.27)
Education, training and library occupations (25)	76	69.7 (59.8 to 79.6)	1.31 (0.75 to 2.29)	65	54.9 (44.0 to 65.8)	1.08 (0.66 to 1.79)
Arts, design, entertainment, sports and media occupations (27)	32	56.2 (41.4 to 71.0)	0.84 (0.43 to 1.65)	29	47.3 (32.5 to 62.2)	0.74 (0.41 to 1.37)
Healthcare practitioners and technical occupations (29)	64	65.4 (55.8 to 75.0)	0.95 (0.61 to 1.49)	64	56.4 (46.7 to 66.1)	1.15 (0.75 to 1.77)
Healthcare support occupations (31)	81	56.7 (46.4 to 67.1)	0.81 (0.47 to 1.37)	76	60.1 (50.4 to 69.9)	1.13 (0.73 to 1.75)
Protective service occupations (33)	36	58.1 (43.3 to 72.9)	0.76 (0.40 to 1.46)	42	57.1 (44.1 to 70.0)	0.89 (0.49 to 1.61)
Food preparation and serving related occupations (35)	195	65.0 (58.1 to 71.9)	1.03 (0.74 to 1.43)	185	56.3 (49.4 to 63.2)	0.92 (0.66 to 1.28)
Building and grounds cleaning and maintenance occupations (37)	106	61.5 (52.6 to 70.5)	0.65 (0.41 to 1.01)	97	53.4 (44.4 to 62.3)	1.14 (0.76 to 1.72)
Personal care and service occupations (39)	86	66.8 (57.7 to 76.0)	1.00 (0.63 to 1.59)	84	58.5 (47.9 to 69.1)	1.37 (0.82 to 2.27)
Sales and related occupations (41)	247	66.1 (60.1 to 72.1)	0.99 (0.74 to 1.32)	234	57.7 (51.8 to 63.6)	1.11 (0.84 to 1.45)
Office and administrative support occupations (43)	314	69.2 (64.0 to 74.5)	1.40 (1.04 to 1.88)**	270	52.2 (47.5 to 57.0)	0.91 (0.72 to 1.16)
Farming, fishing and forestry occupations (45)	11	63.9 (39.2 to 88.6)	1.28 (0.40 to 4.05)	13	57.5 (33.5 to 81.4)	0.99 (0.39 to 2.54)
Construction and extraction occupations (47)	176	66.1 (59.5 to 72.6)	0.92 (0.66 to 1.29)	150	50.0 (43.2 to 56.7)	1.00 (0.74 to 1.35)

Continued

Table 3 Continued

Occupation	Quit interest*			Quit attempt†		
	No. of smokers‡	Unadjusted prevalence % (95% CI)	Adjusted OR (95% CI)§	No. of smokers	Unadjusted prevalence % (95% CI)	Adjusted OR (95% CI)¶
Installation, maintenance and repair occupations (49)	105	71.5 (63.9 to 79.2)	1.35 (0.91 to 2.01)	81	49.2 (40.2 to 58.1)	0.84 (0.57 to 1.24)
Production occupations (51)	173	66.5 (60.2 to 72.7)	0.95 (0.68 to 1.34)	142	48.0 (41.5 to 54.6)	0.83 (0.63 to 1.10)
Transportation and material moving occupations (53)	179	62.1 (55.2 to 69.1)	0.86 (0.61 to 1.21)	162	55.9 (49.3 to 62.4)	1.21 (0.90 to 1.63)

*Quit interest: numerator includes current smokers interested in quitting (n=2228); denominator includes all current smokers (n=3417).
†Quit attempt: numerator includes current smokers who have smoked ≥2 years and attempted to quit in past year (n=1582) and former smokers who quit within the past year (n=425); denominator includes former smokers who quit within the past year (n=425) and current smokers who have smoked ≥2 years (n=3273).
‡Unweighted.
§OR adjusted for demographic characteristics (age group, education, race/ethnicity and marital status) and the significant factors (p<0.05) in the final model (ie, weekly work hours, job insecurity and frequent workplace skin and/or respiratory exposures). Specific industries are compared with all other industries combined, and specific occupations are compared with all other occupations combined.
¶OR adjusted for demographic characteristics (age group, education, race/ethnicity and marital status) and the significant factors (p<0.05) in the final model (ie, hostile work environment, living in a home that permitted smoking and number of cigarettes smoked per day). Specific industries are compared with all other industries combined, and specific occupations are compared with all other occupations combined.
**Significantly different from reference (all other groups combined except group of interest), p<0.05.
††Estimates with a relative SE >50% are not shown as they do not meet standards of reliability/precision.
‡‡Quantity zero.
§§These estimates have a relative SE >30% and ≤50% and should be interpreted with caution as they do not meet standards of reliability/precision.

attempts.[38] As reported by Hyland *et al*[36] and Kahende *et al*,[27] we found that the likelihood of quit attempt decreased with increased smoking intensity. Although we observed an inverse association between smoking intensity and cessation success in the univariate analysis, the association became non-significant in multivariate analysis. In contrast, although Hyland *et al*[36] found that smoking intensity was inversely associated with cessation success in multivariate analysis, that study differed from ours with respect to how cessation and smoking intensity were defined, and to the independent variables included in the multivariate analysis. Our data thus suggest that attempts to quit smoking are inversely related to smoking intensity; however, cessation success appears to be related to experiencing environments that discourage smoking (eg, workplaces and homes with smoke-free policies).

In this study, recent smoking cessation was more likely among those who have health insurance. It has been previously reported that those with health insurance are more likely to receive smoking cessation advice from their healthcare professional[39] and the insurance may also subsidise the cost of drug therapy for smoking cessation. It has also been shown that those with health insurance that covers smoking cessation treatments are more likely to quit.[28] As such, it has been recommended that all insurance plans cover the cost of effective smoking cessation treatments.[28] Given that the Affordable Care Act requires that all new private insurance plans cover such treatments with no cost sharing,[40] the use of these treatments is likely to increase.

There are several study limitations. First, due to its cross-sectional design, we are unable to make inferences regarding the direction of any observed associations (eg, is the reduced success of smoking cessation among those exposed to other smokers at work due to the presence of these other smokers, or are persistent smokers more likely to self-select into workplaces with liberal smoking polices). Second, this study is based on self-reports and none of the responses are verified. Third, there are also limitations associated with the I&O groups used in these analyses. The simple I&O categories lumped together workers who likely had substantially different workplace characteristics. Unfortunately, due to small sample sizes, using more specific I&O categories would have led to smaller cell sizes yielding unreliable estimates.

In summary, data from a large nationally representative sample that includes US workers from all industry and occupation categories indicate that while large proportions are interested in quitting and are making a quit attempt, only a small proportion of smokers succeeds. Our results are consistent with previous studies that showed that smoking cessation success is determined by multiple factors, including those associated with work, behaviour and environment, and that the role of these factors differs at each stage of the cessation process. Although work factors were associated with quit interest (long work hours, job insecurity and frequent workplace skin and/or respiratory exposures) and attempt (hostile work environment), two other non-demographic factors (ie, increasing number of cigarettes smoked and living in a home that permitted smoking) were also strongly associated with lower likelihood of quit attempt. Workers were less likely to successfully cease smoking if they had frequent exposure to others smoking at work or lived in a home that permitted smoking, but more likely with

What this study adds

- Reducing the prevalence of cigarette smoking is an important public health goal.
- This is the first study to estimate the prevalence of three cigarette smoking cessation outcomes (interest, attempt and success), as well as examine associated factors, among workers in a nationally representative sample of US adults.
- Our findings indicate that while large proportions of smoking workers are interested in quitting (65.2%) and are making a quit attempt (53.8%), only a small proportion of smokers succeeds (6.8%).
- Workers were less likely to successfully cease smoking if they had frequent exposure to others smoking at work or lived in a home that permitted smoking, but more likely if they had health insurance.

health insurance coverage. Reducing the prevalence of cigarette smoking is one of the public health goals of Healthy People 2020.[6] Interventions that address multiple work and individual factors along with implementation of workplace rules that restrict smoking are important considerations that could result in significant public health impact.

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