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Workplace secondhand smoke exposure: a lingering hazard for young adults in California

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Abstract

Objective—To examine occupational differences in workplace exposure to secondhand smoke (SHS) among young adults in California.

Methods—Data are taken from the 2014 Bay Area Young Adult Health Survey, a probabilistic multimode cross-sectional household survey of young adults, aged 18–26, in Alameda and San Francisco Counties. Respondents were asked whether they had been exposed to SHS 'indoors' or 'outdoors' at their workplace in the previous 7 days and also reported their current employment status, industry and occupation. Sociodemographic characteristics and measures of health perception and behaviour were included in the final model.

Results—Young adults employed in service ($p<0.001$), construction and maintenance ($p<0.01$), and transportation and material moving ($p<0.05$) sectors were more likely to report workplace SHS exposure while those reporting very good or excellent self-rated health were less likely ($p<0.001$).

Conclusions—Despite California's clean indoor air policy, 33% of young adults in the San Francisco Bay Area still reported workplace SHS exposure in the past week, with those in lower income occupations and working in non-office environments experiencing the greatest exposure. Closing the gaps that exempt certain types of workplaces from the Smoke-Free Workplace Act may be especially beneficial for young adults.

INTRODUCTION

In 1994, California passed the first Smoke-Free Workplace Act in the USA, and prohibition of smoking in indoor workplaces, excepting bars, was added in 1998. Since that time, smoke-free policies have become increasingly common in the USA and, internationally,

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protecting more than 10% of the world's population.[1] In workplaces and other environments where such policies have taken effect, their implementation has been associated with reductions in overall smoking prevalence among employees, as well as in cigarette use per day, and more generally with lower rates of hospitalisation for cardiovascular and respiratory disease and associated medical costs.[2–5] Smoke-free policies have also been shown to be quite popular with affected populations, with support increasing over time and influencing social norms, which in turn may further influence quit attempts and cessation.[16–8] However, protection for a little more than 10% of the world population means that billions of workers and members of the population in general do not benefit from comprehensive or even limited smoke-free policies, and coverage gaps tend to disproportionately affect certain groups.[910] Even in California, which boasts a relatively low smoking prevalence rate (11%) and in which one of the earliest smoke-free policies was established, coverage gaps exist and perpetuate disparities in secondhand smoke (SHS) exposure and associated disease outcomes. In this article, we investigate these disparities as they affect young adult workers, a population shown in previous research to be at increased risk of workplace SHS exposure compared to workers in general.[11]

In California, the Smoke-Free Workplace Act has been instrumental in reducing SHS exposure and related disease outcomes among California's work-force; however, the law is not comprehensive and excludes certain types of businesses and their employees, leaving them at greater risk of exposure. Excluded are certain hotel/motel guest rooms, lobbies and conference facilities, small businesses with five or fewer employees, warehouses of at least 100 000 square feet that have 20 or fewer employees, truck and tractor trailer cabs, patient smoking areas of long-term healthcare facilities and private residences licensed as family day care homes.[9] Additionally, an 'indoor' workplace is defined as having four walls and a ceiling; employees who work on outdoor job sites or in vehicles, private homes and other settings excluded from coverage are at greater risk of SHS exposure.[9]

Furthermore, despite clean indoor air policies in place in California and other states, studies measuring self-reported and biologically measured SHS exposure continue to find that some exposure does occur in the workplace and that this exposure is unevenly distributed. In particular, young adults, Latino, black and lower income employees, are at greater risk of workplace exposure.[9–11] Workers in the skilled and building trades have also been found to have persistently higher smoking rates than other workers and have more difficulty in attempting and maintaining smoking cessation.[11–13] Daily smoking among employees is also more common in workplaces with lax or absent smoke-free policies.[12] Risk of SHS exposure in these environments is further compounded by potential exposure to other toxins, such as asbestos; workers in the building trades demonstrate higher risk for lung cancer and nerve damage as a result of work-place toxic exposures, including SHS.[14]

Enforcing clean indoor air laws is also a substantial task distributed among a variety of city and county agencies across the state and enforcement is unevenly applied. A study of clean indoor air policy enforcement and compliance by the California Tobacco Control Program found that about half of the agencies in the state tasked with enforcement had conducted workplace compliance checks in the previous year and approximately one-third did not report engaging in any SHS enforcement activity the year prior. Rural county agencies were

also less likely to engage in enforcement activities than urban and suburban agencies.[15] Additionally, certain types of bars may be especially resistant to adopting clean indoor air policies; for example, studies in San Francisco and Los Angeles have found persistent indoor smoking in Irish and Korean bars, respectively.[16,17]

SHS exposure has been linked to excess mortality and years of potential life lost, especially among non-white populations, primarily as a result of cardiovascular disease or lung cancer.[18–21] It has also been associated with the development of respiratory disease among children and adolescents as well as young adults employed in workplaces without smoke-free policies.[22,23] Occupational exposure has also been shown to exacerbate asthma among workers previously diagnosed.[24] Furthermore, there is growing evidence that the accumulation of SHS residue on surfaces, or thirdhand smoke, may also be harmful to health and that thirdhand smoke toxicity increases over time.[25,26]

Alternatively, studies measuring health exposures and effects following the implementation of comprehensive smoke-free workplace policies indicate that such policies are effective in restoring lung function in otherwise healthy workers, reducing tobacco use among employees and reducing cardiovascular disease morbidity as well as hospital admissions for heart attack.[4,27–31]

Although young adults have been identified as having greater risk of workplace SHS exposure, we were unable to identify any study looking at occupational differences in exposure in this population. Using data from the 2014 San Francisco Bay Area Young Adult Health Survey (BAYAHS), a probabilistic household sample of young adults aged 18–26 in Alameda and San Francisco Counties, we investigate whether differences by occupation exist and what other sociodemographic and behavioural factors may account for such discrepancies. Specifically, we hypothesise that young adults working in service, construction and trades sectors, that is, lower income occupations with greater likelihood of exemption from California's Smoke-Free Workplace Act, will report greater SHS exposure in the workplace.

METHODS

Sample

This study used data that we collected as part of the 2014 San Francisco Bay Area Young Adult Health Survey, a probabilistic multimode household survey of young adults aged 18–26 years, stratified by race/ethnicity.[32] The study area included Alameda and San Francisco Counties in California. We identified potential respondent households using address lists obtained from Marketing Systems Group (sample 1); there was an ~40% chance that an eligible young adult resided at a selected address (n=15 000 addresses). We further used 2009–2013 American Community Survey and 2010 decennial census data in a multistage sampling design to identify Census Block Groups and subsequently Census Blocks in which at least 15% of residents were Latino or non-Hispanic black adults in the eligible age range (n=1636 housing units) in order to randomly select 61 blocks (sample 2). We oversampled these blocks as young, non-white, urban adults are among the most difficult populations to survey.[33] We then canvassed each selected block to create housing unit lists from which

housing units were randomly selected, and on visiting each household we asked whether a young adult in the eligible age range resided there and if we could speak to the youngest or oldest young adult according to our randomisation procedure.

We conducted the survey in three phases and employed four modes (mail/web, telephone, face to face). In the first phase, we conducted three mailings over the course of 6 weeks with sample 1 households, and respondents returned paper questionnaires or completed surveys online using Qualtrics. In the second phase, we reached out to mail non-responders via telephone, and finally we conducted face-to-face interviews with a random selection of the remaining non-responders (n≈1250) from sample 1 as well as all of the households identified in sample 2. Potential sample 2 respondents did not participate in the mail or telephone phases of the survey; each of these households was visited in person to supplement the original sample and maximise the possibility for completing questionnaires among Latino and black young adults. The final sample consisted of 1363 young adult participants, reflecting a response rate of ~30%, with race, sex and age distributions closely reflecting those of the young adult population overall in the two counties surveyed. Approximately two-thirds of respondents replied via mail or online with most of the remaining responses completed in the face-to-face phase; only a handful of questionnaires were completed via telephone. Individual sample and poststratification adjustment weights were constructed after data collection.

Measures

Outcome—To measure workplace SHS exposure, we asked respondents “have you been exposed to secondhand smoke in any of the following places in the last 7 days?” Possible responses included “indoor at your workplace” and “outdoor at your workplace.” We combined these measures into one dichotomous variable indicating whether the respondent reported any workplace exposure (1) or none (0).

Main covariate: occupational category—As part of a series of labour force questions modelled on the Census Bureau’s American Community Survey instrument, respondents were asked to clearly describe their main job activity ‘last week’, including ‘what kind of work were you doing (e. g. secretary, accountant, cook, teacher, programmer)?’. We assigned occupation codes according to the 2012 Census Industry Classification system, which identifies six broad occupational categories (management, business, science and arts; service; sales and office; natural resources, construction and maintenance; production; and transportation and material moving) and 24 more detailed occupation categories that fall within each of these six categories. These more detailed categories are shown in table 2, with the exception of farming, forestry and fishing and active military as no young adults in our sample were employed in either of these occupations.

Covariates—Other labour force covariates in the analyses included four dichotomous measures of employment status derived from a series of questions based on the American Community Survey. The first two questions ask (1) ‘last week did you work for pay at a job (or business)?’ (2) ‘when did you last work, even for a few days?’. Responses for the latter question include (1) in the past 12 months; (2) 1–5 years ago and (3) more than 5 years ago

or never worked. Participants who indicated that they had worked in the past 12 months were subsequently asked (3) ‘during the past 12 months how many weeks did you work, even for a few hours, including paid vacation, paid sick leave and military service?’; and (4) ‘during the past 12 months, in the weeks worked, how many hours did you usually work each week?’. Respondents who were currently employed, that is, worked ‘last week for pay’, and had worked 35 or more hours per week for 48 or more weeks during the previous year were classified as full-time year-round employees; those working fewer than 35 hours per week for 48 or more weeks were classified as part-time year-round; those working 35 or more hours per week for fewer than 48 weeks were full-time temporary employees; and those working fewer than 35 hours per week for fewer than 48 weeks were part-time temporary.

Demographic covariates included age in years, sex (men=1; women=0), race/ethnicity categorised as Hispanic, non-Hispanic white, non-Hispanic black, non-Hispanic Asian/Pacific Islander and non-Hispanic other race.

Socioeconomic covariates included maternal education classified by whether the respondent’s mother had completed a bachelor’s degree (1) or not (0), total annual individual income in the year prior to the survey, measured continuously, and whether the respondent currently participated in a labour union (1) or not (0).

Attitudinal, behavioural and health status covariates included the extent to which respondents considered SHS to be harmful to general health (1—not at all to 7—extremely), whether respondents indicated that their own health in general was very good or excellent (1) or good, fair or poor (0) and whether the respondent was a current smoker (1) or not (0).

We also controlled for county of residence (San Francisco=1; Alameda=0) as smoke-free policies may vary slightly by municipality within the study area.

Statistical analysis—To measure workplace SHS exposure, we restricted our analysis to currently employed young adults (n=804) who represented 59% of the total sample. Approximately 9% (n=71) of employed young adults in the sample were missing data for employment status and 11% (88) for income. We performed a multiple imputation procedure to adjust for the missing values and tested the models with and without the imputed results to ensure no significant bias was introduced. We conducted two multivariable logistic regressions: first, modelling associations between detailed occupational categories and SHS exposure controlling for employment status and county of residence and, second, employing a hierarchical approach to measure associations between broader occupation categories and SHS exposure controlling for sociodemographic and health characteristics. All analyses were performed in Stata V.13 using the ‘svyset’ command to adjust for complex survey weights and clustering.

RESULTS

Table 1 shows weighted sample characteristics. Among employed young adults, 32.6% reported being exposed to SHS in their workplace in the previous week. Nearly all workplace SHS exposure was accounted for by outdoor exposure (31.2%) rather than indoor

(1.4%). More than two-thirds of respondents were employed in ‘white collar’ occupations, such as management and science, sales and office positions (69%). Service occupations accounted for the largest proportion of remaining workers (22.5%). More than one-third of respondents were classified as part-time temporary employees (39.3%) with 25.5% working full-time throughout the year. The young adult workforce was more female (54.4%) than male (45.6%) while the race/ethnic distribution hewed closely to the population distribution in the Bay Area. The total annual income skewed relatively low ($21 717) but had a broad range. A small proportion of young adults indicated participation in a labour union (13.4%). Young adult workers also reported generally good health (58.8%), a strong perception that SHS is harmful to health (6.4/7) and smoked at rates comparable to all young adults in California (15.8%).

Table 2 shows logistic regression results for workplace SHS exposure by detailed occupation category, controlling for employment status and county of residence. Management occupations are referent in our analyses as they represent the largest proportion of young adults in our sample and tend to be higher income with greater health protections. Consistent with our hypothesis, that is, lower skilled and trade occupations would be associated with greater workplace SHS exposure, four occupational categories demonstrated significant associations with SHS exposure in this model—food preparation and serving-related occupations ($p<0.01$), building and grounds cleaning and maintenance ($p<0.05$), construction and extraction ($p<0.05$), and transportation and material moving occupations ($p<0.05$).

Table 3 shows results for the full logistic regression model, including all covariates and broad occupational categories. Again, service occupations, construction and maintenance occupations, and transportation and material moving occupations were significantly associated with workplace SHS exposure. These relationships were robust and remained significant after controlling for covariates. There was also evidence in the second model iteration that non-Hispanic black employees were more likely to report SHS exposure than non-Hispanic whites ($p<0.05$), but this association was no longer significant once self-rated health was included in the model. Self-rated health was associated with 52% lower odds of reporting workplace SHS exposure ($p<0.001$).

DISCUSSION

Using a representative population-based sample of young adults in the San Francisco Bay Area, we evaluated differences in self-reported workplace SHS exposure by occupation. To the best of our knowledge, this is the first study focusing on occupational disparities in SHS exposure among young adults. Consistent with past findings among employed adults across the age range and with our hypothesis, we found that young adults working in lower wage occupations report greater workplace SHS exposure.[1011] In particular, young adults employed in service, construction, maintenance, transportation and material moving sectors appear to be at greatest risk. These occupational sectors are also more likely to be exempt from California’s Smoke-Free Workplace policy.

We also found very good or excellent self-rated health to be inversely related to workplace SHS exposure, suggesting that employees in better health may be less sensitive to SHS or may be more likely to work in environments with stringent smoke-free policies. Alternatively, variations in the amount of exposure within occupation may mean that employees experiencing less SHS exposure are healthier than their counterparts. Additionally, non-Hispanic black young adults were at greater risk of workplace SHS exposure before controlling for self-rated health, indicating that self-assessed health is a mitigating factor in reporting SHS exposure for this population.

It is notable that nearly all of the young adults reporting SHS workplace exposure indicated that they were exposed outdoors at their workplace. Employees in the occupations implicated may have more occasion to be outdoors due to the types of job duties they perform, such as at a construction site or loading dock or serving customers on an outdoor bar patio. Thus while clean indoor air laws appear to be reducing SHS exposure indoors, more attention needs to be paid to outdoor areas immediately surrounding workplaces. California as well as San Francisco and Alameda Counties do have smoke-free entrances policies in place that disallow smoking within a ‘reasonable distance’ (15 feet in San Francisco and 20 feet in Alameda County) of entrances to commercial, multiunit residential or mixed-use buildings, but the extent to which these policies are enforced or followed is an open question. Recently, the Tobacco Free Project at San Francisco County Department of Public Health implemented a media campaign under the banner ‘curb it’ designed to better inform the public and business owners about the smoke-free entrances policy,[34] but more such efforts sustained over time and backed by enforcement procedures with teeth may be required to substantially reduce the type of outdoor workplace exposure experienced by the young adults in our sample.

More than one-third (35.5%) of the civilian employed young adult population in California works in these occupations at greatest risk of workplace SHS exposure, equating to upwards of one million young adult workers.[35] Latino young adults, a population identified in prior studies as at greater risk of exposure, are also disproportionately represented in service (27% of workers compared to 21% overall) and construction (10% of workers compared to 5% overall) sectors while those identifying as other or multiple races (27% of workers vs 21% overall) and women (25% of workers vs 21% overall) are also overrepresented in service sectors.[35] Young adults employed in service occupations also have the lowest average annual earnings (~$14 000) compared to other employees (~$21 000).[35]

Study limitations

This study has several limitations. First, workplace SHS exposure was self-reported and we were unable to biochemically verify levels of exposure. Second, our data are cross-sectional, and we can neither assess causal relationships between work-place exposure and occupation or employment status nor establish the direction of the relationship between self-rated health and SHS exposure. Third, as respondents were asked to report SHS exposure ‘outdoors’ at their workplace without further specification, we cannot determine where exposure may have occurred, which is likely important for assessing clean air policy compliance. Finally, these data are representative of young adults in the San Francisco Bay Area, but the extent to

which they can be generalised to all young adults remains a question. In particular, state and local policies on smoke-free environments vary from place to place, and young adults in the Bay Area have lower tobacco use rates than nationally.

CONCLUSION

Despite these limitations, our findings further demonstrate a disparity in access to clean air between occupations and underline the risk young adults face in being exposed to SHS at work. California's Smoke-Free Indoor Air Act and subsequently implemented statewide and local policies designed to reduce public exposure to SHS have made a substantial public health impact; however, there remains room for further improvement. Populations identified as having greater risk of SHS exposure in the USA, that is, lower income, non-white and young adult populations, are overrepresented in occupations where more workplace SHS exposure is reported. These occupations are further associated with the types of workplaces most likely to be exempt from the smoke-free workplace law, such as warehouses, private residences and hotels/motels. The disease outcomes most widely associated with SHS exposure, such as respiratory illness, cardiovascular disease and cancer, also disproportionately affect lower income and non-white populations,[36–39] and lower income populations and employees in construction and trade sectors demonstrate higher and more persistent rates of smoking,[1113] further compounding health risks. As of this writing, California had just enacted legislation (June 2016) to close the loopholes in its smoke-free workplace and entrances laws, which should begin to address these disparities and protect all workers from the dangerous effects of SHS exposure.

While this study focused on young adults in California, the findings illustrate the idea that even in areas with near-comprehensive smoke-free policies in place, a lack of truly comprehensive coverage leaves certain populations at greater risk of SHS exposure, potentially depressing quit attempts and cessation among employees as well as disproportionately exposing unprotected workers to disease risk. States and countries adopting smoke-free policies should enact the strongest policy possible and avoid loopholes and exceptions in those policies. Finally, even where legislation exists, enforcement can be difficult. A variety of toolkits and recommendations regarding communication strategies, educational campaigns and institutional support have been developed to provide instruction on this process, which may be useful for regions in the process of implementing smoke-free policies.[4041]

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What this paper adds

Among employed young adults in the San Francisco Bay Area, 33% reported being exposed to secondhand smoke at their workplace in the prior week. Rates of exposure were highest in lower wage occupations, such as service and material moving sectors, and workplace environments excluded from protection under Californias smoke-free workplace policy, such as ‘ construction sites.

Table 1

Weighted sample characteristics of employed young adults, aged 18–26, in the San Francisco Bay Area

	Weighted N=184 989 Unweighted n=804	
SF Bay Area Young Adult Health Survey Characteristic	**% or μ**	**SD**
SHS exposure indoors at workplace	1.4	
SHS exposure outdoors at workplace	31.2	
Occupational category		
Management, business, science and arts (referent)	36.2	
Service	22.5	
Sales and office	32.8	
Natural resources, construction and maintenance	4.7	
Production	1.3	
Transportation and material moving	2.6	
Employment status		
Full-time year-round	25.5	
Part-time year-round	19.7	
Full-time temporary	15.5	
Part-time temporary (referent)	39.3	
Age, years	23.2	2.3
Male	45.6	
Race/ethnicity		
Hispanic	22.9	
White, non-Hispanic (referent)	35.1	
Black, non-Hispanic	9.6	
Asian/Pacific Islander, non-Hispanic	24.0	
Multirace, non-Hispanic	8.3	
Mother has bachelor’s degree or higher	41.0	
Total annual income in 2013	$21 717	
Median income in 2013	$16 750	
Labour union member	13.4	
Perception of SHS harm to babies and children (1—not at all to 7—extremely)	6.4	1.3
Very good or excellent self-rated health	58.8	
Current smoker	15.8	
Resides in SF County (Alameda County=referent)	28.2	

Table 2

Logistic regression of workplace SHS exposure on detailed occupational categories (n=804)

	OR	(95% CI)
Detailed occupational category		
Management (referent)		
Management, business, science and arts occupations		
Business and financial operations	1.2	(0.30 to 4.8)
Computer and mathematical	3.6	(0.70 to 18.6)
Architecture and engineering	0.45	(0.06 to 3.5)
Life, physical and social science	0.48	(0.08 to 2.7)
Community and social service	1.2	(0.17 to 8.5)
Legal	3.8	(0.42 to 35.1)
Education, training and library	1.2	(0.31 to 4.9)
Arts, design, entertainment, sports and media	0.44	(0.06 to 3.1)
Healthcare practitioners	2.5	(0.36 to 17.0)
Healthcare technicians	2.3	(0.28 to 19.4)
Service occupations		
Healthcare support	1.7	(0.41 to 7.0)
Protective services	3.4	(0.70 to 16.6)
Food preparation and serving related	5.4	(1.44 to 20.1)**
Building and grounds cleaning and maintenance	8.3	(1.11 to 62.5)*
Personal care and service	3.4	(0.83 to 13.8)
Sales and office occupations		
Sales and related	2.9	(0.85 to 10.0)
Office and administrative	1.4	(0.41 to 5.0)
Natural resources, construction and maintenance occupations		
Construction and extraction	10.0	(1.56 to 64.7)*
Installation, maintenance and repair	3.2	(0.48 to 22.1)
Production occupations		
Production	0.52	(0.06 to 4.5)
Transportation and material moving occupations		
Transportation and material moving	10.0	(1.27 to 78.6)*
Employment status		
Full-time year-round	1.5	(0.81 to 2.7)
Part-time year-round	1.3	(0.69 to 2.6)
Full-time temporary	0.9	(0.41 to 1.9)
Part-time temporary (referent)		
Resides in SF County (Alameda County=referent)	1.4	(0.85 to 2.2)

* p<0.05;

** p<0.01;

*** p<0.001.

SHS, secondhand smoke.

Table 3

Logistic regression of workplace SHS exposure on occupation, employment status and covariates (n=804)

	Model 1 Occupational category and employment status		Model 2 +Sociodemographic characteristics		Model 3 +Health attitudes, status and behaviour	
	OR	**(95% CI)**	**OR**	**(95% CI)**	**OR**	**(95% CI)**
Occupational category						
Management, business, science and arts (referent)						
Service	2.76	(1.56 to 4.89)***	2.90	(1.57 to 5.39)***	3.07	(1.68 to 5.62)***
Sales and office	1.59	(0.93 to 2.72)	1.72	(0.99 to 2.98)	1.72	(0.99 to 2.99)
Natural resources, construction and maintenance	3.47	(1.09 to 11.02)*	5.14	(1.51 to 17.43)**	4.59	(1.33 to 15.84)**
Production	0.36	(0.06 to 2.35)	0.43	(0.06 to 2.99)	0.38	(0.06 to 2.55)
Transportation and material moving	7.99	(1.35 to 47.50)*	9.14	(1.29 to 64.96)*	6.37	(1.02 to 39.72)*
Employment status						
Full-time year-round	1.70	(0.97 to 3.01)	1.27	(0.61 to 2.64)	1.33	(0.64 to 2.77)
Part-time year-round	1.44	(0.75 to 2.74)	1.39	(0.70 to 2.74)	1.38	(0.71 to 2.68)
Full-time temporary	1.11	(0.57 to 2.15)	0.95	(0.47 to 1.95)	0.96	(0.46 to 1.97)
Part-time temporary (referent)						
Age, years			1.01	(0.91 to 1.13)	1.01	(0.90 to 1.12)
Male			0.73	(0.46 to 1.15)	0.73	(0.46 to 1.17)
Race/ethnicity						
White, non-Hispanic (referent)						
Hispanic			1.44	(0.79 to 2.60)	1.27	(0.70 to2.32)
Black, non-Hispanic			2.30	(1.05 to 5.03)*	1.82	(0.84 to 3.95)
Asian/Pacific Islander, non-Hispanic			1.69	(0.94 to 3.04)	1.51	(0.84 to 2.74)
Multirace, non-Hispanic			0.78	(0.33 to 1.86)	0.69	(0.28 to 1.72)
Mother has bachelor’s degree or higher			1.16	(0.72 to 1.86)	1.29	(0.80 to 2.07)
Total annual income in 2013			1.00	(0.99999 to 1.00002)	1.00	(1.00 to 1.00)
Labour union member			0.82	(0.43 to 1.58)	0.90	(0.47 to 1.71)
Perception of SHS harm					1.03	(0.87 to 1.22)
Very good or excellent self-rated health					0.48	(0.30 to 0.74)***

	Model 1		Model 2		Model 3	
	Occupational category and employment status		+Sociodemographic characteristics		+Health attitudes, status and behaviour	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Current smoker					1.15	(0.67 to 1.97)
Resides in SF County (Alameda County=referent)					1.35	(0.83 to 2.18)

* p<0.05;

** p<0.01;

*** p<0.001.

SHS, secondhand smoke.