

A More Comprehensive View of Worksite and Home Smoking Bans: A Promising Approach But Are We Reaching All Working Women?

Tobacco Research Network on Disparities
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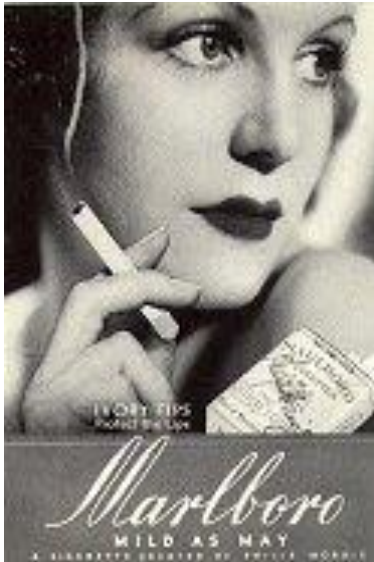
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Introduction: Women and Smoking in the United States



Brief History

- Late 1920's: tobacco industry begins marketing in women's magazines
- 1950-2003: lung cancer death rates *increased 600%*
- 1987: lung cancer death rates surpassed breast cancer

Current Trends

- Lung cancer remains leading cause of cancer deaths
 - 1 out of 5 women continue to smoke (18%)¹
 - Higher prevalence among women from low socioeconomic backgrounds
 - Women's health, social and economic well-being at risk
- “Together, tobacco and poverty form a vicious circle from which it is often difficult to escape.” WHO (2004)***

Introduction: Why Focus on Women and Worksite and Home Smoking Bans?

- **Framework Convention on Tobacco Control (FCTC)**
 - need to examine policies from a gender-perspective
- **Bans benefit both non-smokers and smokers**
 - U.S. Surgeon General: “no safe level of secondhand smoke exposure”
 - decreased exposure, improved health outcomes
 - decreased prevalence via ↑ cessation and ↓ youth initiation
 - consumption also decreases
- **Smoke-free worksites**
 - associated with increase in home bans
 - also benefits employers (cost-savings)
- **Smoke-free homes**
 - limits exposure among children including third-hand smoke exposure
- **Significant progress but gaps remain**
 - current smokers, low income populations, racial/ethnic groups, women working in service industries

Study Purpose

Among U.S. Employed (Indoor) Female Adult Smokers:

1. Examine **prevalence rates** of work and home smoke-free policy levels
2. Examine **association** of work and home smoke-free policy coverage on smoking and quitting behaviors

Methods

➤ **Sample: N=7,610**

- 2006 Tobacco Use Supplement to the Current Population Survey
- Cross-sectional, nationally representative
- employed (indoor) female smokers (ages 18-64)

➤ **Main Independent Variable: Types of Smoke-Free Policy Coverage**

- both complete worksite and home smoking bans
- complete home ban only
- complete worksite ban only
- no complete ban at work or home

➤ **Outcomes**

- intent to quit in next 30 days (yes vs. no)
- quit attempt in past year (1+ day vs. none)
 - among those who intend to quit
 - among those who do not intend to quit
- sustained quit in past year (3+ months vs. ≤ 3 months)
 - among those who made a quit attempt in past year

Methods

➤ **Statistical Analyses**

- Used SUDAAN to control for the complex survey design
- Computed weighted estimates of smoke-free policy coverage and outcomes by demographics, smoking, quitting behaviors
- Conducted bivariate analyses to determine association of smoke-free policy coverage and other factors with outcomes
 - included variables significant at .25 level in multivariate models
- Developed four multivariate models (one for each outcome)

Results

Prevalence Rates of Smoke-Free Policy Coverage		
	N=7610	%
Full work and full home ban	2216	28.8
Full work ban only	3071	39.5
- Full work/partial home	1390	18.3
- Full work/no restrictions at home	1681	22.1
Full home ban only	882	12.2
- Full home/partial work	403	5.3
- Full home/no restrictions at work	479	6.9
No full ban at work or at home	1338	18.2
- Partial work/partial home	297	4.1
- Partial work/no restrictions at home	434	5.9
- Partial home/no restrictions at work	267	3.7
- No restrictions at work or home	340	4.5

Smoke-Free Policy Coverage by Sociodemographics

	% Full Work & Home Ban	% Full Work Ban Only	% Full Home Ban Only	% No Full Ban at Work or Home
<u>Income</u>				
< 25,000	21	41	13	23
25,000-49,999	27	42	12	19
50,000+	35	36	13	15
Unknown	30	42	7	17
<u>Education</u>				
0-11 th grade	17	48	12	22
GED only	23	40	13	23
High School only	26	41	12	19
Some college	32	38	12	17
College degree +	38	35	12	13
<u>Occupation</u>				
Blue Collar	18	46	9	26
Service	23	39	14	22
White Collar	32	39	12	16
<u>Race/ethnicity</u>				
African American	17	48	9	24
White	29	40	12	18
Hispanic	39	28	17	15
Other	31	31	16	21

Quitting Intentions and Behaviors by Smoke-Free Policy Coverage

	Intent to Quit: Next 30 Days	Quit in Past Year: 1+ day		Sustained Quit in Past Year: 3+ Months
	% Yes	% Yes among those who intend to quit	% Yes among those who do not intend to quit	% Yes
Full Work and Full Home Ban	20	55	33	19
Full Work Ban Only	14	57	26	16
Full Home Ban Only	20	57	34	26
No Full Ban at Work or Home	14	54	25	14

Multivariate Logistic Regression: Intent to Quit in Next 30 Days (Yes vs. No)

Covariates	OR (95% CI)	Covariates (continued)	OR (95% CI)
<u>Smoke-Free Policy</u>		<u>Region</u>	
No Complete Bans	1.00	Northeast	1.00
Complete Work & Home Ban	1.20 (0.94-1.52)	Midwest	1.02 (0.80-1.31)
Complete Work Ban Only	0.96 (0.78-1.17)	South	0.73 (0.58-0.92)**
Complete Home Ban Only	1.24 (0.92-1.68)	West	0.83 (0.62-1.11)
<u>Education</u>		<u>Smoking frequency</u>	
0-11 th grade	1.00	Daily	1.00
GED only	2.33 (1.54-3.51)**	Non-daily	2.59 (2.01-3.33)***
High school only	1.93 (1.34-2.78)**		
Some college/no degree	2.19 (1.48-3.25)**	<u>Cigarettes per day</u>	
Associate degree	1.72 (1.14-2.57)**	<6	1.70 (1.26-2.29)**
College degree +	2.18 (1.49-3.20)**	6-10	1.34 (1.10-1.64)**
<u>Occupation</u>		11-19	1.08 (0.83-1.41)
White-collar	1.00	20+	1.00
Blue-collar	0.73 (0.55-0.98)*		
Service	0.81 (0.65-1.02)		
<u>Household type</u>			
Husband and wife/family	1.00		
Unmarried male w/family	1.05 (0.64-1.73)		
Unmarried female w/family	0.81 (0.65-1.00)+		
Unmarried male/no family	0.72 (0.46-1.12)		
Unmarried female/no family	1.06 (0.83-1.36)		

*p < .0001; **p ≤ .01; ***p ≤ .05; + p = .05

Note: Other variables included in model but not significant at .05 level: age, race/ethnicity, family income, more than one job, place of work, hours works/week, household type (own vs. rent), time to 1st cigarette, age started smoking.

Multivariate Logistic Regression: Quit in Past Year (1+ Day vs. 0) Among Those Who Intend to Quit

Covariates	OR (95% CI)	Covariates (continued)	OR (95% CI)
<u>Smoke-free policy</u>		<u>Place of work</u>	
No Complete Bans	1.00	Office building	1.00
Complete Work & Home Ban	1.63 (1.01-2.62)*	Another indoor place	0.65 (0.46-0.92)*
Complete Work Ban Only	1.28 (0.83-1.99)		
Complete Home Ban Only	1.64 (0.94-2.88)	<u>Region</u>	
		Northeast	1.00
<u>Age</u>		Midwest	1.99 (1.23-3.22)**
18-24 yrs	1.00	South	1.28 (0.78-2.11)
25-44 yrs	0.50 (0.26-0.96)*	West	2.30 (1.37-3.86)**
45-64 yrs	0.52 (0.25-1.10)		
		<u>Smoking frequency</u>	
<u>Occupation</u>		Daily	1.00
White-collar	1.00	Non-daily	4.13 (2.22-7.69)***
Blue-collar	2.95 (1.45-6.01)**		
Service	1.25 (0.81-1.94)	<u>Cigarettes per day</u>	
		<6	1.64 (0.82-3.29)
<u>More than one job</u>		6-10	1.83 (1.18-2.86)**
No	1.00	11-19	0.99 (0.56-1.76)
Yes	0.45 (0.20-0.97)*	20+	1.00

*p < .0001; **p ≤ .01; ***p ≤ .05; + p = .05

Note: Other variables included in model but not significant at .05 level: race/ethnicity, marital status, time to 1st cigarette, age started smoking.

Multivariate Logistic Regression: Quit in Past Year (1+ Day vs. 0) Among Those Who Do NOT Intend to Quit

Covariates	OR (95% CI)	Covariates (continued)	OR (95% CI)
<u>Smoke-free policy</u>		<u>Educational attainment</u>	
No Complete Bans	1.00	0-8 th grade	1.00
Complete Work & Home Ban	1.36 (1.09-1.70)**	9-11 th grade	0.45 (0.22-0.92)*
Complete Work Ban Only	1.05 (0.85-1.30)	GED only	0.44 (0.22-0.88)*
Complete Home Ban Only	1.33 (1.02-1.72)*	High school only	0.48 (0.24-0.95)*
		Some college/no degree	0.52 (0.27-1.03)
<u>Age</u>		Associate degree	0.74 (0.37-1.48)
18-24 yrs	1.00	College degree +	0.59 (0.30-1.17)
25-44 yrs	0.75 (0.57-0.98)*	<u>Smoking frequency</u>	
45-64 yrs	0.65 (0.48-0.87)**	Daily	1.00
		Non-daily	2.00 (1.56-2.57)***
<u>Race/ethnicity</u>		<u>Cigarettes per day</u>	
White	1.00	<6	1.86 (1.42-2.44)***
African-American	1.21 (0.88-1.66)	6-10	1.50 (1.24-1.82)***
Hispanic	0.71 (0.50-0.99)*	11-19	1.23 (0.97-1.57)
Other	1.42 (0.98-2.06)	20+	1.00

*p < .0001; **p ≤ .01; ***p ≤ .05; + p = .05

Note: Other variables included in model but not significant at .05 level: annual family income, occupation, more than one job, hours work/week, place of work, marital status, household type, household payment type, region, time to 1st cigarette, age started smoking.

Multivariate Logistic Regression: Sustained Quit in Past Year (3+ months vs. ≤ 3 months) Among Those Who Made a Quit Attempt in Past Year

Covariates	OR (95% CI)
Smoke-Free Policy	
No Complete Bans	1.00
Complete Work & Home Ban	1.35 (0.87-2.08)
Complete Work Ban Only	1.29 (0.83-2.00)
Complete Home Ban Only	1.67 (1.00-2.79)+
Education	1.00
0-11 th grade	0.90 (0.44-1.84)
GED only	0.78 (0.45-1.36)
High school only	0.51 (0.29-0.89)*
Some college/no degree	0.53 (0.28-1.00)+
Associate degree	0.63 (0.34-1.17)
College degree +	

Covariates (continued)	OR (95% CI)
Household type	
Husband and wife/family	1.00
Unmarried male w/family	1.87 (1.01-3.47)*
Unmarried female w/family	0.93 (0.65-1.32)
Unmarried male/no family	0.83 (0.40-1.72)
Unmarried female/no family	0.85 (0.56-1.27)
Time to 1st cigarette	
30+ minutes	1.00
<30 minutes	0.64 (0.47-0.87)**

*p < .0001; **p \leq .01; ***p \leq .05; + p = .05

Note: Other variables included in model but not significant at .05 level: age, race/ethnicity, family income, more than one job?, place of work, hours work/week, geographic region, age started smoking, smoking status (everyday vs. someday), cigarettes per day, quit intention

Summary

➤ Smoke-Free Policy Prevalence Rates

- Full coverage (ban at work and at home) is low (<30%) and even lower among low SES groups
- Vary by race/ethnicity

➤ Smoke-Free Policies and Quitting Intentions and Behaviors

	Intend to Quit in Next 30 Days	Quit in Past Year: 1+ day		Sustained Quit in Past Year: 3+ Months
		Among those who intend to quit	Among those who do not intend to quit	
Complete Work & Home Ban	NS	+	+	NS
Complete Work Ban Only	NS	NS	NS	NS
Complete Home Ban Only	NS	NS	+	+(marginal)

Implications and Conclusions

- Need to improve rates of full ban at work and at home
 - nearly 71% lacking complete coverage at both work and home
 - 32% unprotected at work
 - 58% unprotected at home
 - no safe level of exposure
- Efforts to increase rates of bans must address low SES
- Demonstrates importance of home smoking ban
 - Emphasis on work bans for everyone may also promote home bans
 - Identify messages and strategies that appeal to current smokers, women, and all members of household
 - Maintenance of home smoking ban is critical – what kind of support and incentives may be useful?
 - Possible support systems – family members and friends, health care and other service providers (including child care providers), employers, media, environmental, social and health policies

Dissemination

- World Conference on Tobacco or Health, March 2008, Mumbai, India

- In press

