

Black and Hispanic Smokers are Less Likely than Whites to be Tobacco Dependent

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OBJECTIVE

To explore racial differences in tobacco dependence in a nationally representative sample of cigarette smokers

METHODS

- The Social Climate Survey of Tobacco Control (SCS-TC) is administered annually to a nationally representative sample of adults (age ≥ 18 years)
- 2011 SCS-TC included 133 questions regarding exposure to & attitudes about second-hand smoke; rules about smoking in respondent's household & workplace; attitudes toward smoking; attitudes toward community restrictions on smoking, access to tobacco, government control over tobacco products; personal smoking history, current behavior & use of quitting aids; & demographics
- Tobacco dependence assessed with 3 items measuring response to withdrawal symptoms -- response options *True*, *Not True*, *Don't Know*:
 - **Wanting:** "If I go too long without smoking the first thing I will notice is a mild desire to smoke that I can ignore."
 - **Craving:** "If I go too long without smoking, the desire for a cigarette becomes so strong that it is hard to ignore and it interrupts my thinking."
 - **Needing:** "If I go too long without smoking I just can't function right, and I know I will have to smoke just to feel normal again."
- Stage of tobacco dependence is assigned based on the highest level of symptom reported:
 - Stage 1 - No Symptoms reported
 - Stage 2 - Wanting reported
 - Stage 3 - Craving reported
 - Stage 4 - Needing reported

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DATA ANALYSIS

- Data analyses were conducted using SPSS version 19.
- Stages were collapsed into Less Advanced Dependence (stages 1 & 2) and More Advanced Dependence (stages 3 & 4)
- The distribution of racial groups across the stages was examined using a Chi-square test
- Differences in proportions were evaluated using the z-test for independent proportions
- Racial differences were assessed with stepwise logistic regression controlled for sex, age, income, and education level.

PARTICIPANTS

- Participants were drawn from the probability-based Internet panel (obtained from Knowledge Networks). Total N = 1597.
- Study participants were 256 respondents who indicated that they were current smokers (i.e., had smoked at least once in the preceding 30 days)
 - Race (self-identified):
 - 196 White
 - 32 Black
 - 28 Hispanic
 - 56% Male
 - Ages:
 - 18-29 years - 15.9%
 - 30-44 years - 23.6%
 - 45-59 years - 41.2%
 - ≥60 years - 19.3%
 - Education:
 - < HS - 18.5%
 - HS - 39.9%
 - Some college - 27.5%
 - Bachelor's or higher - 14.2%
 - Annual Income:
 - < \$30,000 - 36.9%
 - \$30,000-59,999 - 27.5%
 - \$60,000-99,999 - 19.8%
 - ≥\$100,000 - 15.9%

RESULTS

Stage of Tobacco Dependence	Race					
	White		Black		Hispanic	
	n	%	n	%	n	%
Stage 1 or 2	76	38.8	23	71.9	16	57.1
Stage 3 or 4	120	61.2	9	28.1	12	42.9
$\chi^2 (2) = 14.08, p = .001$						
Black vs. White: $z = -3.51, p = .001$ two-tailed						
Hispanic vs. White: $z = -1.85, p = .065$ two-tailed						
Black vs. Hispanic: $z = -1.19, p > .10$ two-tailed						

LOGISTIC REGRESSION PREDICTING STAGE OF TOBACCO DEPENDENCE

Predictor	Wald	df	p	B	SE	Odds Ratio	95% Confidence Interval
Race	14.50	2	.001				
Black vs. White				1.56	0.46	4.76***	1.92-11.82
Hispanic vs. White				0.44	0.62	1.55	0.46-5.23
Age	9.17	3	.027				
18-29 vs. other				0.47	0.45	1.59	0.66-3.87
30-44 vs. other				0.50	0.42	1.64	0.73-3.71
45-59 vs. other				1.15	0.40	3.15**	1.45-6.83
Education	13.18	3	.004				
< HS vs. other				1.47	0.58	4.35*	1.39-13.65
HS vs. other				0.12	0.51	1.13	0.42-3.04
Some college vs. other				-0.02	0.50	0.99	0.37-2.64
Income	0.70	3	> .10				
< \$30,000 vs. other				0.26	0.47	1.30	0.52-3.25
\$30,000 - \$59,999 vs. other				0.40	0.49	1.49	0.57-3.86
\$60,000 - \$99,999 vs. other				0.16	0.48	1.18	0.46-3.04
Sex	2.33	1	< .10	-0.44	0.29	0.64	0.36-1.13

* $p = .012$, ** $p = .004$, *** $p = .001$

DISCUSSION

There is a concern that racial differences in nicotine metabolism may confound the assessment of dependence when measures rely on the number of cigarettes smoked per day, as when the Fagerström scales are used to diagnose dependence.

The measure of dependence in the current study is based on the most serious reported withdrawal symptom, regardless of level of cigarette consumption.

CONCLUSION

Our results suggest that there are strong racial differences in susceptibility to developing more advanced symptoms of physical dependence to tobacco that are not explained by age, gender, income or educational levels.

Prevention and cessation efforts may be improved by assessing stage of tobacco dependence in addition to daily consumption, particularly among black smokers.