

# Smoking Cessation Factors among African Americans and Whites

## ABSTRACT

**Objectives.** This study was undertaken to explore smoking patterns and attitudes that influence smoking cessation and relapse among African Americans.

**Methods.** Baseline data from eight Community Intervention Trial for Smoking Cessation (COMMIT) sites were analyzed.

**Results.** Compared with Whites, African Americans who smoke less than 25 cigarettes per day were 1.6 times more likely to smoke within 10 minutes of awakening (a behavioral indicator of nicotine dependence), adjusting for education, age, and gender (OR=1.2 for heavier smokers). African Americans reported a stronger desire to quit smoking and reported serious quit attempts in the past year. African Americans favored tobacco restrictions (they were 1.8 times more likely than Whites to view smoking as a serious community problem, 1.7 times more likely to favor restrictions on cigarette vending machines, and 2.1 times more likely to prohibit smoking in their car). African Americans were lighter/moderate, menthol smokers.

**Conclusions.** African Americans find smoking socially unacceptable and are strongly motivated to quit, but their "wake-up" smoking may indicate high nicotine dependence, making abstinence difficult even for lighter smokers. (*Am J Public Health.* 1993;83:220-226)

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## Introduction

Sociodemographic differences in cancer and heart disease incidence, mortality, and survival are well documented.<sup>1,2</sup> For African Americans, smoking-caused diseases contribute to the excess burden.<sup>3-6</sup> An unexplained paradox is that African Americans smoke fewer cigarettes per day<sup>2,7,8</sup> and tend to begin smoking later in life<sup>9,10</sup> than do Whites, yet their smoking-related disease mortality is higher. Smoking fewer cigarettes also implies that African Americans should have an easier time quitting,<sup>11</sup> but their smoking prevalence continues to exceed that of Whites,<sup>6,8,12,13</sup> primarily as a result of their lower success in quitting, regardless of socioeconomic status.<sup>13</sup> Another factor that may influence health outcomes and habituation is that while African Americans smoke fewer cigarettes than do Whites,<sup>6</sup> they prefer menthol cigarettes, which have a higher tar and nicotine content.<sup>6,14-19</sup>

The excess tobacco-caused health burden is, of course, also related to the disproportionate distribution of African Americans in lower socioeconomic levels. Studies have suggested that factors associated with poverty and population density account for an increased cancer incidence among African Americans.<sup>20,21</sup> Persistent differences in health care access and treatment,<sup>22,23</sup> as well as cultural factors,<sup>21</sup> prevention knowledge and behavior,<sup>24,25</sup> and occupation-related factors,<sup>26</sup> compound racial/ethnic differences in morbidity and mortality.

The purpose of this study was to analyze racial/ethnic differences in smoking patterns and attitudes in order to explore barriers to quitting among African-American smokers. Relatively few studies have

been directed toward understanding and controlling smoking among African Americans.<sup>18,27-34</sup> We used baseline data from the Community Intervention Trial for Smoking Cessation (COMMIT) to examine ethnic differences in three smoking cessation/relapse factors: (1) motivation to stop smoking, (2) time to first cigarette of the day (a behavioral indicator of nicotine dependence), and (3) norms and values about tobacco control.

## Methods

### Study Population

The Community Intervention Trial for Smoking Cessation is a 7-year, multi-center, cooperative research project testing the hypothesis that community-based intervention activities can increase the cessation rate among smokers, particu-

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larly heavy smokers who smoke 25 or more cigarettes per day.<sup>35</sup> Eleven pairs of communities (10 in the United States and 1 in Canada) are involved. Implementation of the 4-year intervention (1988 to 1992) follows a standardized community organization and mobilization protocol and a mandated activity protocol delivered through extensive community advisement and involvement.<sup>36</sup> Since an important goal of the trial is to change the normative environment in which smoking exists, local changes in tobacco use policies are encouraged. Various aspects of study design<sup>37</sup> and intervention protocol<sup>35</sup> have been described elsewhere.

This paper reports the results of analyses of baseline telephone survey data from 8 of the 22 COMMIT sites, the communities with African-American populations over 12%. Respondents were adults, 25 through 64 years of age, from metropolitan communities in California, New Jersey, New York, and North Carolina. Items from two separate COMMIT surveys provided data for this report: (1) the smokers component of the baseline survey that reached randomly selected smokers in each community in 1988 and (2) the attitude component of the evaluation cohort survey conducted in early 1989 that reached a stratified random subsample of smokers and nonsmokers who were identified in the 1988 survey (survey descriptions are available from the COMMIT coordinating center).

The baseline survey was part of a large survey that screened 6000 households in each community. For the study population described in this report, interviews were completed with 91.3% of smokers identified from the household rostering. For the evaluation cohort survey containing attitude items, approximately equal numbers ( $n = 100$ ) of heavy smokers (25 or more cigarettes per day), light/moderate smokers (less than 25 cigarettes per day), recent ex-smokers (within 5 years), and nonsmokers (stopped smoking over 5 years ago or never smoked) were identified in each of the communities during the 1988 household survey. For the eight communities in this report, 72.7% of smokers interviewed at baseline participated in the 1989 evaluation cohort survey (62.0% of African Americans and 73.0% of non-Hispanic Whites). (Additional details are available from the authors.) The Biostatistics Division of the National Cancer Institute developed the sampling frames and supervised the telephone interviews that were conducted centrally by subcontractors.

### Measures and Coding of Variables

Smoking behaviors, sociodemographic status, and motivation to quit smoking were based on items from the baseline survey. Smoking control attitudes and behaviors were based on items in the evaluation cohort survey that included questions about smoking norms and values, the social acceptability of smoking, and smoking control issues.

The study population for this report was restricted to respondents describing themselves as either African American or non-Hispanic White. Ethnic group determination was based on two questions: "Are you Hispanic?" and "Which of the following categories best describes your racial background? Are you: White, Black, Asian or Pacific Islander, American Indian or Alaskan native, other?" Those categorized as "Hispanic-Black" were included with "African American."

Using standard definitions, educational attainment (highest grade of regular school attended) and current occupation (blue collar vs white collar) served as independent indicators of socioeconomic status. Educational attainment was coded as a dichotomy (high school graduate or less than high school contrasted with schooling beyond high school). Respondents holding blue-collar jobs in crafts, trades, factory, labor, and service categories were compared with those holding white-collar jobs in professional, administrative, clerical, and sales categories. Age was stratified by three categories (25 through 34, 35 through 44, or 45 through 64 years).

Smoking status was based on self-report. In both surveys, respondents were asked, "Have you smoked at least 100 cigarettes in your entire life?" "Do you smoke cigarettes now?" Smoking status was taken from each survey (i.e., smoking status in 1988 was used for the baseline survey questions; for the 1989 attitude questions, respondents were defined as smokers if they were smokers in 1988 as well as 1989). Ever smokers were asked, "How old were you when you first started smoking cigarettes regularly?" For analyses of attitude data reported here, the nonsmoker category included both those who had never smoked and recent and long-term former smokers (stopped smoking over 5 years ago or within the past 5 years). Following COMMIT guidelines, heavy smokers were defined as those who smoke 25 or more cigarettes on an average day and lighter/moderate smokers were defined as those smoking less than 25 cig-

arettes per day. Attempts to stop smoking in the past year was based on the questions "How many times since (a year ago) have you made a serious attempt to quit smoking?" and "How many of these times were you able to stay off cigarettes for at least 24 hours?" Number of quit attempts was then dichotomized as at least one quit attempt in the past year resulting in not smoking for a 24-hour period in contrast to no attempts in the past year.

Time to first cigarette of the day, a strong determinant of quitting<sup>38</sup> as well as a behavioral component of nicotine dependence,<sup>39,40</sup> was based on the question "How soon after you wake up do you have your first cigarette? Less than 10 minutes, from 10 to 30 minutes, from 31 minutes to 1 hour, from 61 minutes to 1.5 hours, from 91 minutes to 3 hours, more than 3 hours?" The latest scoring for time to first cigarette described by Fagerstrom and colleagues<sup>40</sup> is similar to the scoring used here. Instead of their earlier two-category coding (less than 30 minutes vs more than 30 minutes), Fagerstrom and colleagues recently used four categories (less than 5 minutes, 6 through 30 minutes, 31 through 60 minutes, and 61 or more minutes before first cigarette of the morning).<sup>40</sup> Motivation to stop smoking was assessed by the question "Which of the following best describes how much you want to quit smoking? Do you want to quit not at all, a little, somewhat, a lot?"

For this report, we selected items to assess the social acceptability of smoking and social pressures to restrict smoking in three areas: (1) attitudes about smoking policy, (2) perception of priority of smoking as a community issue, and (3) self-reported smoking control behaviors.

Attitude toward tobacco control policy was assessed as follows: "I'm going to read you some statements about cigarette smoking. As I read each one, tell me if you agree or disagree with the statement (respondents were then asked, "Do you strongly agree/disagree or somewhat agree/disagree?"): 'Cigarette vending machines should be eliminated from places where teenagers gather.'" Responses were recorded on a 4-point scale (1 = strongly agree, 2 = somewhat agree, 3 = somewhat disagree, 4 = strongly disagree).

Perception of the attitude of the respondent's community toward priority of smoking as a public health issue was assessed as follows: "There are many health problems facing communities these days. How serious a health problem do you feel smoking is in your community? Please an-

**TABLE 1—Sociodemographic Characteristics of Study Populations, 1988 Baseline Survey and 1989 Evaluation Cohort Survey, Eight Urban Communities**

	Smokers Sample, %		Attitude Sample, %	
	African American (n = 3418)	Non-Hispanic White (n = 8550)	African American (n = 547)	Non-Hispanic White (n = 1888)
Women	54.7	52.7	57.5	51.8
Age, y				
25–34	36.2	36.5	29.4	34.6
35–44	31.2	28.8	32.3	29.4
45–64	32.6	34.7	38.3	36.0
Education attained				
High school or less	46.2	39.2	41.7	30.6
Beyond high school	53.8	60.8	58.3	69.4
Blue-collar worker	43.4	31.1	43.8	27.1
Smoking status				
Smoker	100.0	100.0	48.4	48.9
Nonsmoker	...	...	51.6	51.1

*Note.* Items were taken from the Community Intervention Trial for Smoking Cessation baseline survey (for the smokers sample) and the evaluation cohort survey (for the attitude sample). Smokers in the attitude sample identified themselves as smokers on the baseline survey.

swer using a 5-point scale where 5 is very serious and 1 is not serious at all.”

Questions regarding smoking control behavior included these: “During the past 12 months, have you felt pressure from other people to quit smoking? From whom?” “Do you think that your smoking has already affected your health?” “In the last 12 months, have you encouraged someone to quit smoking? Who?” and “In general, do you allow others to smoke in your car?”

Following standard procedures, we examined the distribution for all variables of interest; then, for logistic regression analyses, we dichotomized dependent variables to permit conceptually valid and statistically appropriate cutoff points (e.g., strong agreement on vending machine restrictions vs the other three categories on a 4-point scale or smoking viewed as a very serious public health problem vs the other four categories on a 5-point scale).

### Statistical Analysis

We first examined racial/ethnic differences in the dependent and independent variables, and then constructed logistic regression models for each dependent variable using SAS LOGIST procedures.<sup>41</sup> Relative frequencies and their 95% confidence intervals are reported for categorical variables.

All analyses were completed separately for women and men and for three levels of smoking (more than 24, 16 through 24, or 1 through 15 cigarettes per day), and then combined models were tested that

adjusted for gender and smoking level as well as site and sociodemographic variables. In general, the combined models are presented here; however, occurrences of gender- or smoking-level differences are discussed. (Additional analyses are available on request from the authors.)

## Results

### Characteristics of Study Population

Sociodemographic characteristics of the sample are listed in Table 1. For the smokers component of the baseline survey, 11 968 African-American and non-Hispanic White smokers were interviewed (28.6% were African American, and the distribution of gender and age was similar for the two ethnic groups). Educational attainment was higher in the White group; also, of those employed, the African-American sample had a higher proportion in the blue-collar category. Multiple logistic regression analyses adjusted for these factors. The African-American sample (data not shown) had a lower proportion currently married or living with a partner (47.8% vs 63.0%) and was more likely to have a yearly household income of less than \$25 000 (54.0% vs 32.1%).

For the 1989 evaluation cohort survey, conducted several months after the baseline survey, a subsample of 1190 smokers (those who identified themselves as smokers on both surveys) and 1245 nonsmokers was interviewed. Of these, 22.5% were African American, and the

two ethnic groups had similar distributions of gender and age.

### Ethnic Differences in Smoking Patterns

The smoking initiation age for African-American women and men was significantly later than for Whites in both the more and less educated groups (data not shown). African-American women with education beyond high school, for example, started smoking at 19.7 years of age (SE = 0.14); White women with similar education started smoking at 18.6 years (SE = 0.08, n = 4108, z = 6.41, P < .001). The tendency in both genders and ethnic groups was for the younger age cohorts to start smoking earlier. For example, older African-American women (45 through 64 years old) started smoking regularly at 21.0 years of age, 35- through 44-year-olds started at 19.5 years, and 25- through 34-year-olds started at 18.0 years.

Consistent with other studies,<sup>6,17</sup> we found that African-American women and men were lighter/moderate smokers (81.8% smoke less than 25 cigarettes per day vs 58.8% for Whites) and were much more likely to be menthol smokers (63.2% vs 27.6%). African-American women showed the highest proportion of lighter/moderate smokers (85.1%) and menthol smokers (66.7%) compared with the other ethnic or gender groups. We also found that a significantly higher proportion of African-American than White smokers reported at least one serious quit attempt in the previous year and stopped smoking for at least 24 hours (43.3% vs 36.3%). African-American women showed the highest proportion in terms of quit attempts (46.0%), and White men the lowest proportion (34.9%). These associations persisted across site, age strata, gender, occupation, and educational attainment. For example, African Americans were 1.2 times more likely than Whites to make serious quit attempts (95% CI = 1.14, 1.27).

### Factors Influencing Time to First Cigarette

The original 8-item Fagerstrom Tolerance Questionnaire, developed in the 1970s to provide a self-report measure of dependency on nicotine, included time to first cigarette and number of cigarettes per day.<sup>39</sup> These two items were chosen for the COMMIT baseline survey because they were found to be as (or more) highly correlated with biochemical and behavioral measures of nicotine dependence as the total Fagerstrom score.<sup>42</sup> Recently, Fagerstrom and coworkers modified the

TABLE 2—Ethnic Differences in Wake-up Smoking for Women by Age, Education, and Smoking Level

	Light/Moderate Smokers			Heavy Smokers		
	African American, % (n)	White, % (n)	Odds Ratio (95% CI)	African American, % (n)	White, % (n)	Odds Ratio (95% CI)
All women	24.7 (1573)	17.0 (2923)	1.6 (1.37, 1.86)	59.4 (278)	50.7 (1572)	1.4 (1.08, 1.84)
Age, y						
25–34	22.8 (602)	15.2 (1096)	1.7 (1.27, 2.14)	60.2 (88)	45.6 (498)	1.8 (1.11, 2.94)
34–44	28.0 (479)	16.8 (762)	1.9 (1.45, 2.56)	61.9 (105)	53.3 (486)	1.4 (0.90, 2.25)
45–64	23.9 (490)	19.0 (1063)	1.3 (1.02, 1.74)	54.8 (84)	53.1 (586)	1.1 (0.66, 1.74)
Education						
High school or less	28.5 (657)	20.9 (1163)	1.5 (1.20, 1.89)	60.3 (131)	56.5 (701)	1.2 (0.79, 1.79)
Beyond high school	22.0 (913)	14.4 (1753)	1.7 (1.36, 2.07)	58.2 (146)	45.8 (862)	1.7 (1.14, 2.39)

Note. Wake-up smoking (nicotine dependence) was defined as smoking first cigarette less than 10 minutes after awakening (vs 10 or more minutes after awakening). Lighter/moderate smokers = < 25 cigarettes per day; heavy smokers = 25 or more cigarettes per day.

Fagerstrom Test for Nicotine Dependence and concluded that these two items alone resulted in the best model for predicting biochemical measures.<sup>40</sup> In addition, time to first cigarette has been found to be a significant independent determinant of quitting smoking.<sup>38</sup>

As expected, most heavy smokers in our sample had their first cigarette of the day within 30 minutes of awakening (79.2%), and a large proportion of lighter/moderate smokers also smoked within 30 minutes (43.2%). To examine differences in more detail, we dichotomized the “highly nicotine-dependent” smokers as those who reported smoking their first cigarette within 10 minutes of awakening (compared with 10 minutes or more). This coding is supported by recent Fagerstrom modifications.<sup>40</sup> Models with three smoking levels (less than 16, 16 to 24, or 24 or more cigarettes per day) were analyzed separately because combined analyses obscured important patterns of timing of the first cigarette and others have strongly recommended controlling for number of cigarettes per day in interpreting Fagerstrom items.<sup>42</sup>

As shown in Table 2, African-American women of all ages and both educational levels who were lighter/moderate smokers (less than 25 cigarettes per day) were more likely to be “wake-up” smokers (to have their first cigarette within 10 minutes of awakening) than were Whites (overall unadjusted OR = 1.6, 95% CI = 1.37, 1.86). When we examined lighter (less than 16 cigarettes per day) and moderate (16 to 24 cigarettes per day) female smokers separately (data not shown), ethnic differences in time to first cigarette remained. For women who were heavier smokers (25 or more cigarettes per day), 59.7% of African-Americans were

TABLE 3—Odds Ratios Estimated by Logistic Regression for Effect of Sociodemographic Factors on Wake-up Smoking

	Adjusted Odds Ratio (95% CI)	
	Light/Moderate Smokers (n = 7582)	Heavier Smokers (n = 4059)
African American	1.6 (1.39, 1.76)	1.2 (1.03, 1.46)
High school education or less	1.4 (1.24, 1.57)	1.3 (1.18, 1.52)
Older age	1.1 (1.04, 1.20)	1.1 (1.04, 1.21)
Women	1.0 (0.93, 1.18)	1.2 (1.02, 1.31)

Note. Wake-up smoking (nicotine dependence) was defined as smoking first cigarette less than 10 minutes after awakening (vs 10 or more minutes after awakening). The model was adjusted for site as well as all variables listed. Lighter/moderate smokers = < 25 cigarettes per day; heavy smokers = 25 or more cigarettes per day.

wake-up smokers compared with 50.7% of Whites. Among heavy smokers, the youngest African-American women (25 through 34 years old) and those with education beyond high school were more likely to be wake-up smokers than were similar White women (Table 2).

The association of ethnicity with early time to first cigarette for men who were light/moderate smokers was similar to women smoking the same number of cigarettes per day (data not shown in Table 2); however, among male heavy smokers, African Americans and Whites did not differ in time to first cigarette. Overall, African-American men who were lighter/moderate smokers were 1.5 times more likely than Whites to be wake-up smokers (23.1% vs 16.6%; 95% CI = 1.26, 1.81), but only the less educated were wake-up smokers (28.1% vs 18.2%; OR = 1.8, 95% CI = 1.34, 2.30). Ethnic differences in men persisted when lighter and moderate smokers were examined separately.

Table 3 presents the results of logistic regression analyses estimating the effects of ethnicity on time to first cigarette for

heavy and lighter/moderate smokers, adjusting for site and sociodemographic factors. The difference in proportion between African Americans and Whites in early smoking is expressed as the relative odds of smoking the first cigarette within 10 minutes. For lighter/moderate smokers, the odds of smoking within 10 minutes for African-Americans was 1.6 times that of Whites after adjustment for educational attainment, age, gender, and site (95% CI = 1.39, 1.76). For African Americans who were heavier smokers, the odds of being a wake-up smoker, compared with Whites, was 1.2 (95% CI = 1.03, 1.46). Overall, women and men with less education are more likely to be wake-up smokers than are those with higher educational attainment, regardless of ethnic background, age, and smoking level (for lighter/moderate smokers, OR = 1.4, 95% CI = 1.24, 1.57; for heavier smokers, OR = 1.3, 95% CI = 1.18, 1.52). A similar pattern of significant ethnic differences in time to first cigarette was found (data not shown) when all analyses were repeated with lighter smokers and moderate smokers.

	Adjusted Odds Ratio <sup>b</sup>	95% CI
African American	1.5	1.34, 1.65
Quit tries (1+)	2.9	2.72, 3.03
Wait less than 10 minutes	1.2	1.06, 1.30
Blue collar	1.2	1.11, 1.36
Older age	1.2	1.15, 1.28
Lighter/moderate smoker	1.0	0.89, 1.10
High school education or above	1.0	0.94, 1.14
Men	1.0	0.89, 1.07

<sup>a</sup>Want to quit smoking "a lot" vs all other categories.  
<sup>b</sup>Adjusted by logistic regression for site and all other variables listed.

### Motivation to Quit Smoking

Since over 65% of the sample wanted to quit smoking (somewhat or "a lot"), we compared, in logistic regression analyses, those with the strongest motivation to quit ("want to quit a lot") with the other three categories in order to examine finer distinctions (only 15% said they did not want to quit at all). More African-American than White smokers wanted to quit "a lot" (46.0% vs 35.0% for women, 44.4% vs 33.3% for men).

The logistic regression model shown in Table 4 contrasts a strong desire to quit with a less strong or no desire to quit, adjusting for smoking and sociodemographic factors. Smokers reporting the strongest desire to quit also reported making quit attempts. Those who had made at least one quit attempt in the past year and had stayed off cigarettes for at least 24 hours were 2.9 times more likely to report the strongest desire to quit (95% CI = 2.72, 3.03). Race/ethnicity, however, was also important. African-American women and men were 1.5 times more likely to report a strong desire to quit than were White smokers, regardless of sociodemographic and smoking factors (95% CI = 1.34, 1.65). Smokers who were wake-up smokers, older, and blue-collar workers reported a stronger desire to quit smoking than did less-nicotine-dependent, younger, or white-collar smokers.

Survey Item	Adjusted Odds Ratio <sup>a</sup>	95% CI
Smoking is a community health problem (n = 2314)	1.8	1.40, 2.19
Cigarette vending near teens should be eliminated (n = 2412)	1.7	1.35, 2.09
Smoking is prohibited in car (n = 2402)	2.1	1.67, 2.63

<sup>a</sup>Models comparing African Americans with Whites were adjusted by logistic regression for site, gender, education, age, and smoker/nonsmoker status.

### Social Pressures to Restrict Smoking

Reports from 10 US COMMIT communities show that smokers and nonsmokers overwhelmingly approved of smoking restrictions in public places, were well aware of smoking risks, and felt that tobacco sales and advertising should be regulated.<sup>43</sup>

When we examined ethnic differences among the eight sites for this report, we found that African Americans were as likely or more likely than Whites to favor strong restrictions on smoking and to hold the view that smoking was unacceptable. Similar proportions of African-American and White smokers felt that their smoking had already affected their health (49.8% of African Americans and 53.5% of Whites) and reported feeling pressure from their physicians to quit smoking (51.2% of African Americans and 48.5% of Whites). African Americans did, however, report significantly less pressure in general from people to quit (56.1% vs 73.4%) and felt significantly more pressure to quit from their children (65.6% vs 49.2%). A similar proportion of nonsmokers in both ethnic groups (about 75%) said that they encouraged people to stop smoking; among smokers, however, African Americans were less likely than were Whites to encourage others to quit smoking (38.0% vs 45.5%).

Higher proportions of African-American smokers as well as nonsmokers felt that smoking was a very serious public health problem in their community (38.1%

of African-American nonsmokers vs 25.5% of White nonsmokers, 25.6% of African-American smokers vs 15.0% of White smokers), strongly agreed that cigarette vending machines should be restricted where teenagers gather (80.9% of African-American nonsmokers vs 68.3% of White nonsmokers, 65.2% of African-American smokers vs 56.1% of White smokers), and did not allow smoking in their car (72.1% of African-American nonsmokers vs 58.3% of White nonsmokers, 27.1% of African-American smokers vs 13.5% of White smokers).

Logistic regression analyses for three smoking control questions are shown in Table 5. After adjustment for educational attainment, age, gender, site, and smoking status, African-American women and men were 1.8 times more likely than Whites to feel that smoking was a very serious public health problem in their community, were 1.7 times more likely to favor restrictions on vending machines, and were 2.1 times more likely to prohibit smoking in their car.

### Discussion

The COMMIT baseline data show that African-American smokers were highly motivated to stop smoking, made serious quit attempts, and had strong concerns about the social and health consequences of smoking. Our analyses extend or confirm previous research in several areas. We found that regardless of educational level, occupation, age strata, and smoking pattern, African-American smokers were more strongly motivated than were Whites to quit smoking<sup>18,44</sup> and had made serious, but unsuccessful, attempts to quit in the past year. We also found that, for both women and men, the distinctive African-American pattern of fewer cigarettes per day and high-nicotine/menthol preference<sup>17,18,45</sup> exists regardless of education, occupation, or age cohort.

We identified two new areas with implications for smoking control interventions. We found that significantly more African-American smokers than White smokers, regardless of the number of cigarettes they smoked per day, had their first cigarette within 10 minutes of awakening (a behavioral indicator of nicotine dependence), after adjustment for education, age, and number of cigarettes per day. We also found that African-American women and men, both smokers and nonsmokers, viewed smoking as socially unacceptable and were more likely than

Whites from the same communities to favor tobacco restrictions.

A potential limitation in interpreting our data concerns the suggestion that low-income African Americans<sup>46</sup> and less acculturated Hispanics<sup>47</sup> tend to provide extreme response categories; however, we did not find this pattern in our data. Socioeconomic status adjustment controlled statistically for this potential confounding. It is also important to note that the social construct "African American" is clearly a proxy for other structural, social, cultural, and psychological statuses and that African-American individuals are diverse, with varying group and personal resources.<sup>48,49</sup>

In sum, the COMMIT data offer an explanation for the inconsistency of "lighter" smoking with difficulty quitting in the long term. Since African Americans are wake-up smokers who smoke high-tar/nicotine menthol cigarettes, they may be considered to be more "nicotine dependent"<sup>40</sup> and to have difficulty quitting despite smoking fewer cigarettes per day. The wake-up cigarette could reflect socio-cultural and physiological<sup>50</sup> factors, and economics could dictate smoking fewer cigarettes and more efficient compensatory smoking (inhaling deeper and smoking more of the cigarette). Menthol additives complicate the picture by possibly permitting deeper inhalation, resulting in stronger addiction.<sup>14,33,51</sup> For many African Americans, quitting and relapse problems are compounded by poverty effects and underaddressed health concerns, limited access to quitting resources, tobacco company attention,<sup>52,53</sup> and stress and life-course hardships.<sup>54</sup> African-Americans' dependence on tobacco is underscored in this report by their higher motivation to quit, their serious quit attempts ending in relapse, and their strong support for communitywide smoking restrictions.

Data from the Community Intervention Trial for Smoking Cessation hold promise for multifaceted smoking interventions<sup>51,55-57</sup> incorporating readiness-to-change dynamics.<sup>58</sup> African Americans want to stop smoking, they welcome smoking restrictions, and smoking control programs report success with both African-American and White smokers.<sup>59</sup> Our results suggest that African-American smoking control interventions should challenge misconceptions about the safety of low-rate smoking of menthol cigarettes that "taste good" and mask smoking irritation,<sup>18,60</sup> prepare high-nicotine smokers for quitting with nicotine fading and brand switching techniques,<sup>61</sup> and should emphasize relapse prevention,<sup>62-65</sup> active

stress reduction,<sup>51,66,67</sup> and cultural meanings of smoking.<sup>68</sup> While the specific elements of culturally sophisticated smoking control programs remain unknown,<sup>69</sup> the results reported here indicate that African Americans find smoking socially unacceptable and are receptive to stop-smoking messages. □

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