

WHO'S QUITTING IN NEW YORK:
A DECADE OF PROGRESS
REDUCING SMOKING AND
PROMOTING CESSATION

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Who's Quitting in New York: A Decade of Progress Reducing Smoking and Promoting Cessation

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EXECUTIVE SUMMARY

Between 2000–2001 and 2008–2009, adult smoking prevalence in New York State declined from 22.4% to 17.4%, and the percentage of adult smokers who made quit attempts increased from 54.5% to 65.6%. Given these statewide changes, it is important to identify whether the population has shifted as a whole or if differences exist by demographic characteristics. In this report, we explore differences in smoking prevalence and the percentage of adult smokers who made a quit attempt by demographic characteristics. We also explore differences in utilization of quit strategies and other influences.

Specific findings include the following:

- Between 2000–2001 and 2008–2009, smoking prevalence declined significantly among adults with the greatest decline among young adults aged 18 to 24 years.
- Despite positive changes in smoking prevalence and smoking cessation, smoking prevalence remained unchanged for African American and Hispanic adults. Also, no changes were noted for adults with low incomes, less than a high school education, and poorer mental health.
- The marked decrease in the young adult smoking rate is likely the result of the significant decline in youth smoking initiation in New York State rather than any increases in smoking cessation among this age group over time.
- Young adults are less likely than older adults to use smoking cessation supports, such as smoking cessation classes and smoking cessation medications.
- Increases in quit attempts paired with relatively small decreases in smoking prevalence suggest that the 40 to 64 age group struggles with relapse more than other age groups.
- Decreases in smoking prevalence appear to be driven largely by declines among white and Hispanic adults.
- Those with poorer mental health are more likely to use smoking cessation supports, such as smoking cessation classes and smoking cessation medications.
- African American adults report higher confirmed awareness of antitobacco advertisements than white and Hispanic adults.
- Smokers aged 40 to 64 report higher confirmed awareness of antitobacco advertisements than all other age groups.
- A lower percentage of smokers holding a college degree or making \$90,000 or more per year are assisted with their quit attempts by health care providers than smokers who have less than a college degree or make less than \$90,000 per year.

Despite positive trends in smoking and smoking cessation over the past decade, additional efforts are needed to ensure that all demographic groups become tobacco free.

1. INTRODUCTION

Tobacco use is the leading preventable cause of death and disease in the United States (Mokdad et al., 2004). Each year, in New York State and throughout the country, thousands of people die from smoking-related diseases and thousands more suffer from exposure to secondhand smoke. Since 1989 when the first clean indoor air law was passed in New York State, the prevalence of smoking in New York has decreased from 23.8% to 17.9% (Behavioral Risk Factor Surveillance System [BRFSS], 1989–2009). Despite the overall decrease in smoking prevalence, there is considerable variation in smoking prevalence and quit attempt rates across many population groups within the state.

The goal of this report is to identify changes in smoking prevalence and quit attempts among various adult population groups over time. This report also identifies differences by demographic groups in support for and influences on smoking cessation. These strategies and influences include assistance from a health care provider with a quit attempt, cessation counseling, cessation medications, and awareness of antitobacco television advertisements.

2. BACKGROUND

Many individual characteristics are associated with smoking prevalence and cessation. No single factor can completely account for the pattern of tobacco use among individuals. The 1998 Surgeon General report concluded that tobacco use patterns are the result of complex interactions of multiple factors, such as socioeconomic status, cultural characteristics, acculturation, stress, biological elements, targeted advertising, the price of tobacco products, and varying capacities of communities to mount effective tobacco control initiatives (USDHHS, 1998). In the sections below, we briefly review previous studies that have examined how various sociodemographic factors are associated with smoking prevalence and smoking cessation. This background information presents national data that informed our analytic approach and provides context for interpreting the New York–specific analyses presented after.

2.1 Gender

Historically, smoking prevalence has been significantly lower among women than among men, due in part to the widespread social disapproval of women smoking. Smoking prevalence among men peaked in the 1950s but did not peak for women until 1965 (USDHHS, 2001). Women have been differentially targeted by tobacco advertising (Boyd, Boyd, & Greenlee, 2003; Pierce et al., 1991), resulting in significant increases in the number of young women smokers (Berman & Gritz, 1991; French & Perry, 1996). The Surgeon General's report on women and smoking notes that data are insufficient to reach a definitive conclusion as to whether smoking cessation is more difficult for women (USDHHS, 2001).

2.2 Age

Smoking patterns have been shown to differ dramatically by age. In 2009, smoking prevalence nationally was between 20% and 25% for adults aged 18 to 64. In contrast, only 12.5% of adults aged 65 to 74 and 6.0% of adults older than age 75 were current smokers (USDHHS, 2010). The low prevalence of smoking among these older age groups is a result of continuing smokers being less likely to live to older ages than never smokers or even former smokers (USDHHS, 1989, 1990). In addition, older smokers have been found to be more motivated to maintain abstinence once they do quit (Giovino, 2002; Hatziafreu et al., 1990).

2.3 Race/Ethnicity

Important differences exist in smoking prevalence nationally by race/ethnicity. In 2009, smoking prevalence was lower among Hispanic adults (13.6%) than non-Hispanic white adults (21.2%) and non-Hispanic African American adults (20.4%) (USDHHS, 2010). Although minorities, especially African American and Hispanic women, try to quit more often than white adults (Barbeau, Krieger, & Soobader, 2004; Davila et al., 2009; Fu et al., 2005; Levinson et al., 2004), they have much lower quit success rates (Cokkinides et al., 2008; Thorndike, Biener, & Rigotti, 2002; Zhu et al., 2000). Studies have shown that African American and Hispanic adults use smoking cessation treatments at about half the rate of white adults (Cokkinides et al., 2008; Levinson et al., 2004; Zhu et al., 2000). Furthermore, research indicates that individuals who attempt to quit without aids have a lower success rate (Silagy et al., 2004).

2.4 Socioeconomic Characteristics

According to the 1989 Surgeon General's report (USDHHS, 1989), both education and income are important determinants of an individual's smoking status. Currently, smoking prevalence among adults with less than a high school education (28.2%) is more than three times higher than smoking prevalence among adults with postgraduate education (6.3%) (USDHHS, 2010). Likewise, smoking prevalence declines with increases in income (USDHHS, 2010).

Lower socioeconomic status is associated with an increased risk of smoking initiation and progression to regular smoking and a decreased likelihood of successful smoking cessation (Gilman, Abrams, & Buka, 2003). Renters are more likely to smoke when compared with owner-occupiers, as are manual and non-manual laborers when compared with professionals and semi-professionals (Laaksonen et al., 2005). Several studies have also examined the association between socioeconomic characteristics, particularly education, and smoking cessation and found that there is a steady increase in the likelihood of quitting smoking as educational attainment increases (Giovino, 2002; Wetter et al., 2005). Adults aged 25 or older with low educational attainment smoke at higher rates than those with

higher attainment. Specifically, respondents whose education level is at or below a high school diploma comprise approximately half of all current smokers. Additionally, these smokers have the lowest quit rates (CDC, 2008). These findings are consistent with national data indicating that the quit rates for lower-education smokers are dramatically lower than for smokers with graduate degrees (CDC, 2002).

2.5 Mental Health

Studies have shown that people with serious mental illnesses have significantly elevated rates of smoking relative to the general population. According to the National Institute of Mental Health, an estimated 26.2% of Americans suffer from diagnosable mental disorders in a given year (Kessler et al., 2005); however, the burden of illness is concentrated in a much smaller proportion of the population, about 6%, who suffer from a serious mental illness. In a 2000 study, approximately 50% of those diagnosed with non-affective psychosis (i.e., schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, and atypical psychosis) during their lifetimes were current smokers compared with 22.5% of those without mental illness (Lasser et al., 2000).

Furthermore, depression is associated with increased rates of smoking. One study shows that a smoker is three times more likely to be depressed than a nonsmoker (Murphy et al., 2003). The suggestion here is not that smoking causes depression, but rather that depressed individuals are more likely to self-medicate with cigarettes. Murphy and colleagues (2003) found that people suffering from depression make fewer quit attempts than people who never become depressed. Similarly, El-Guebaly and colleagues (2002) found that despite the high prevalence of smoking among those with mental illness, quit rates following smoking cessation interventions were only marginally lower among the mentally ill than among healthy individuals. This finding reflects sustained quit attempts immediately following treatment and 12 months after treatment.

3. DATA AND METHODS

3.1 Data

3.1.1 Data Sources

The data in this report are from the New York Behavioral Risk Factor Surveillance System (BRFSS) and New York respondents from the New York Adult Tobacco Survey (ATS) and the National Adult Tobacco Survey (NATS). The BRFSS was developed by the Centers for Disease Control and Prevention (CDC) in 1984 and collects data on the civilian, noninstitutionalized, adult population aged 18 or older. The survey is a state-representative survey of health risk behaviors, preventive health practices, and health care access. The data in this report were collected in 2000, 2001, 2008, and 2009.

The ATS is a quarterly survey of the noninstitutionalized adult population, aged 18 or older, in New York State. Since its inception in Quarter 3, 2003, information has been collected on (a) adult attitudes and beliefs toward, and use of, tobacco; (b) purchasing behavior and cessation attempt behavior among adult smokers; (c) health status and problems among all respondents; (d) attitudes toward, and exposure to, secondhand smoke; (e) perceptions of risk related to tobacco use; (f) recollection of exposure to tobacco or antitobacco advertising; and (g) attitudes toward tobacco control policies.

NATS is a quarterly survey modeled after the ATS. In Quarter 4, 2007, we began surveying respondents from all 50 states and the District of Columbia. The data in this report combine New York respondents from the ATS and NATS for 2008 and 2009.

3.1.2 Demographic Measures

The continuous measures of age in the BRFSS and ATS are categorized into 18- to 24-year-olds, 25- to 39-year-olds, 40- to 64-year-olds, and 65 years or older. We present findings for three races/ethnicities: white, non-Hispanic; African American, non-Hispanic; and Hispanic. Education is classified as those with less than a high school education, those who graduated from high school or obtained their GED, those with some college experience, and those with a college degree or higher.

The income categories in the BRFSS are different from the ATS. BRFSS income is categorized as less than \$25,000; \$25,000 to \$49,999; \$50,000 to \$74,999; and \$75,000 or more. ATS income is categorized as less than \$30,000; \$30,000 to \$59,999; \$60,000 to \$89,999; and \$90,000 or more. Even though categorical differences exist between the two surveys, we are still able to draw conclusions by comparing low- and high-income respondents from the BRFSS and ATS.

Both the BRFSS and ATS ask, "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" We define "good" mental health as those who report fewer than 12 days of "not good" mental health.

3.1.3 Outcome Measures

Using BRFSS data, smoking prevalence is defined as a respondent who now smokes every day or some days and has smoked 100 cigarettes in their lifetime. Among current smokers, quit prevalence is defined by those who stopped smoking for 1 day or longer in the past year because they were trying to quit smoking.

3.1.4 Quit Strategies and Influences

The quit strategies and influences are estimated using ATS data. Assistance with a quit attempt by a health care provider is defined by those who were advised to quit smoking and who were recommended to set a specific date to stop smoking; used a cessation class,

program, or counseling; called a telephone quitline; were provided with booklets, videos, or other material to quit smoking; or were prescribed cessation medication.

Cessation counseling is defined as a current smoker who made a quit attempt in the past year and who has attended a stop-smoking clinic, cessation class, or support group; received counseling; or received help from a telephone quitline when trying to stop smoking. Similarly, use of smoking cessation medications is defined as a current smoker who made a quit attempt in the past year who used medications like the nicotine patch, nicotine gum, Zyban, or Chantix.

Confirmed awareness of antitobacco television advertisements is defined by those who recall specifics about the advertisements without assistance. For example, to determine confirmed awareness of "The Wait," a respondent is first asked, "Have you recently seen an antitobacco ad on TV that shows a man waiting in the doctor's office?" If the respondent answers "yes," then he or she is asked what happens in the ad. If the respondent correctly identifies what happens in the ad, he or she is said to have confirmed awareness.

3.2 Methods

We conducted bivariate analyses of current smoking and quit attempts by demographic measures across time using data from the BRFSS. Because the annual estimates may vary from year to year, we pooled two early years (2000 and 2001) and the two most recent years (2008 and 2009). These pooled data allow for more stable estimates and result in stronger tests of significance. For each demographic group, we tested for differences between 2000–2001 and 2008–2009. Of note, although smoking prevalence decreased and quit attempts increased for men and women, the magnitude of change was similar for each. Therefore, we do not present findings by gender in this report.

When examining the strategies for and influences on quitting, we performed bivariate analyses of cessation counseling, use of cessation medications, assistance by health care providers with quit attempts, and awareness of antitobacco television advertisements by demographics using 2008–2009 ATS data. We pooled these years to mirror the BRFSS analysis. We tested for differences between each demographic group to identify current differences.

We used Stata 11 analytic software to test for significant differences between categories, thus providing a more sensitive test than determining significance based on whether confidence intervals overlap. Tests for differences over time compare 2000–2001 values to 2008–2009 values. Tests for demographic differences compare 2008–2009 categorical values (e.g., 18- to 24-year-olds versus 25- to 39- year-olds). All differences noted in the text are statistically significant at $p < 0.05$. Of note, despite pooling the data to increase sample sizes, some of the groups of interest have relatively small sample sizes.

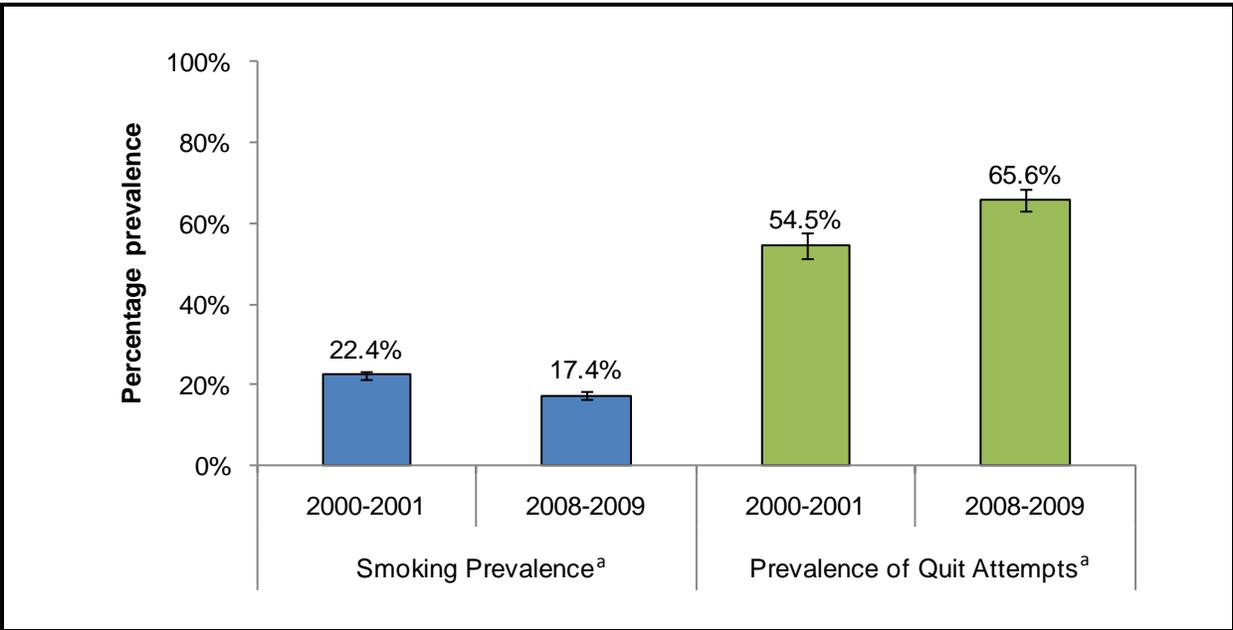
4. PREVALENCE

In this section, we present smoking prevalence and quit prevalence overall and by age, race/ethnicity, education, income, and mental health. This section illustrates the overall positive trends in smoking and quit attempts, while highlighting differences in changes over time among various subgroups.

4.1 Smoking and Quit Attempts

Both smoking prevalence and the prevalence of making one or more quit attempts differed significantly between 2000–2001 and 2008–2009 (Figure 1). In terms of relative change, smoking prevalence declined by 22% and the prevalence of quit attempts increased by 20% from 2000–2001 to 2008–2009. Overall, this is a positive finding; however, there are significant differences by demographic groups. As shown in Section 4.2, smoking prevalence has remained unchanged among African American smokers and among smokers with low educational attainment, low incomes, and poorer mental health.

Figure 1. Smoking Prevalence and Prevalence of Quit Attempts, 2000–2001 and 2008–2009 BRFSS

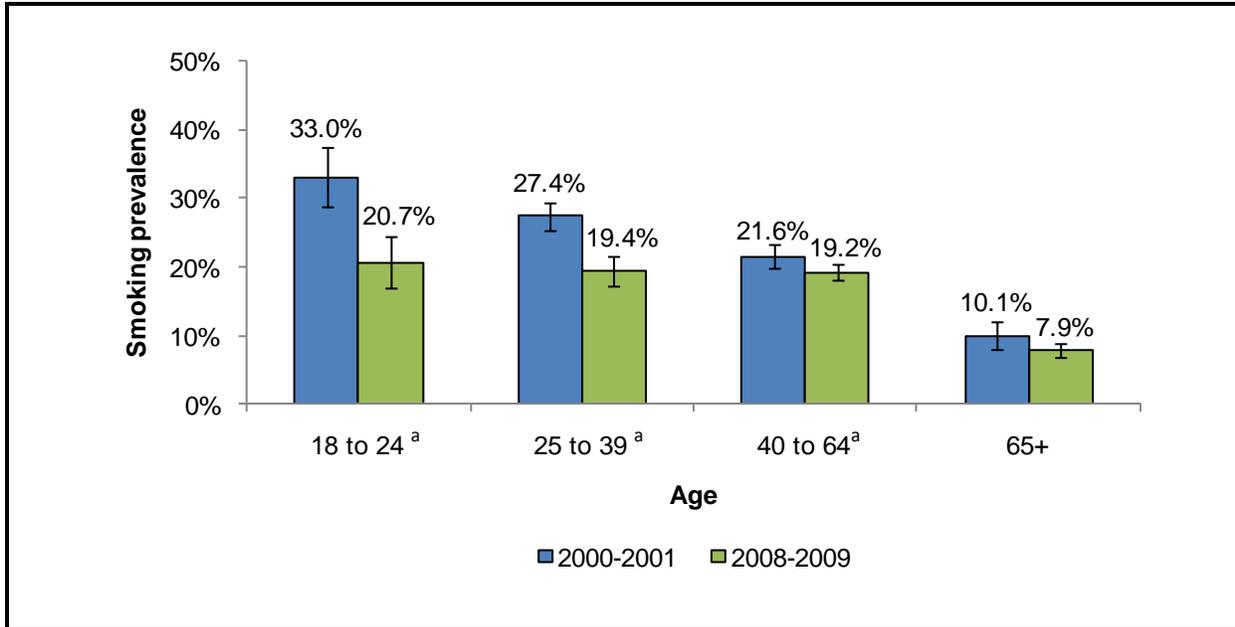


^a Statistically significant difference between 2000–2001 and 2008–2009.

4.2 Smoking Prevalence

Between 2000–2001 and 2008–2009, smoking prevalence declined significantly among adults aged 18 to 24, 25 to 39, and 40 to 64 (Figure 2). Relative to 2000–2001, smoking prevalence in 2008–2009 declined by 37% among 18- to 24-year-olds, 29% among 25- to 39-year-olds, and 11% among 40- to 64-year-olds. Figure 2 also illustrates that smoking prevalence steadily decreases with age.

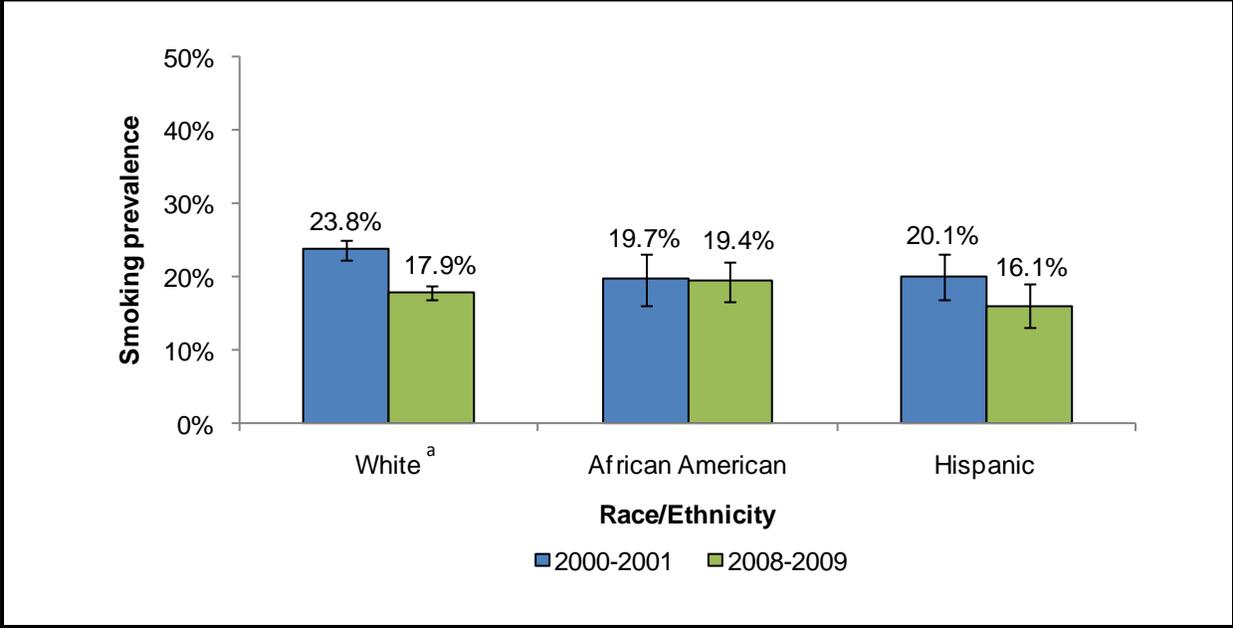
Figure 2. Smoking Prevalence by Age, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

Smoking prevalence among white adults declined 25% from 2000–2001 to 2008–2009 (Figure 3). This decrease is statistically significant. Smoking prevalence did not change significantly among African American or Hispanic adults.

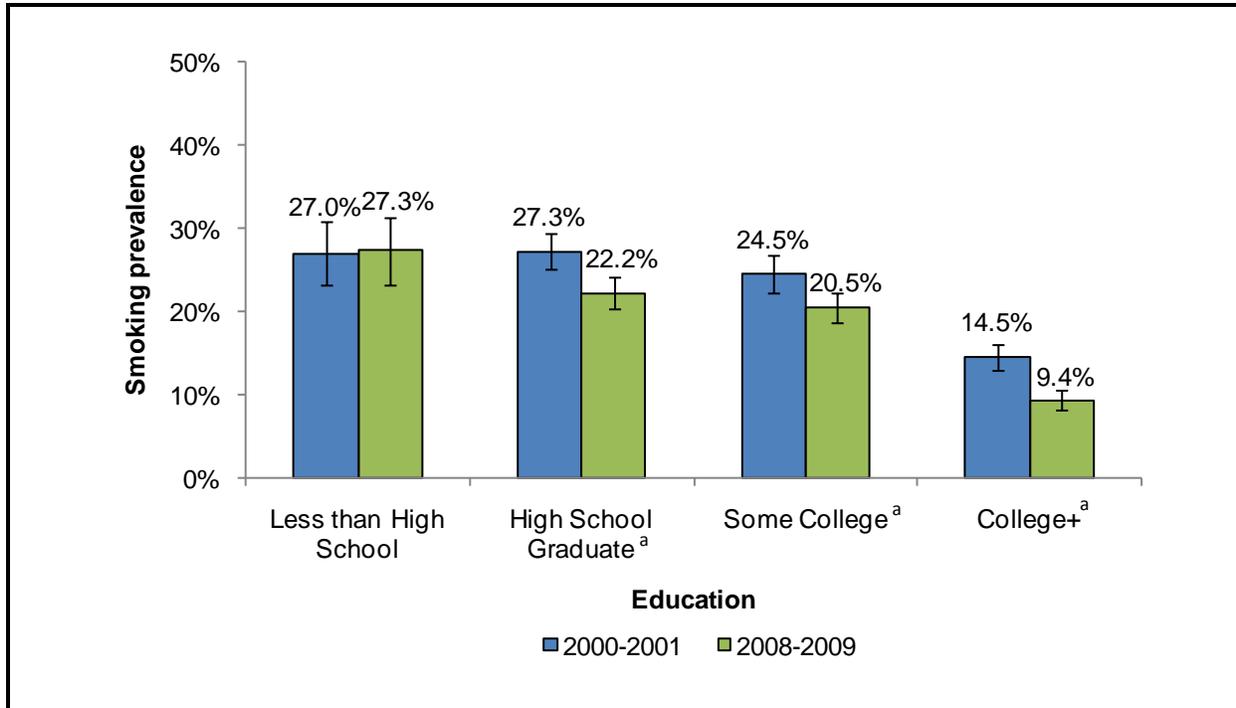
Figure 3. Smoking Prevalence by Race/Ethnicity, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

Adults who have a high school education or higher reported statistically significant declines in smoking prevalence between 2000–2001 and 2008–2009 (Figure 4). Specifically, smoking prevalence declined 19% among high school graduates, 17% among those with some college experience, and 35% among adults who have a college degree from 2000–2001 to 2008–2009. There was no change in smoking prevalence among adults who have less than a high school degree. As shown, smoking prevalence decreases with education.

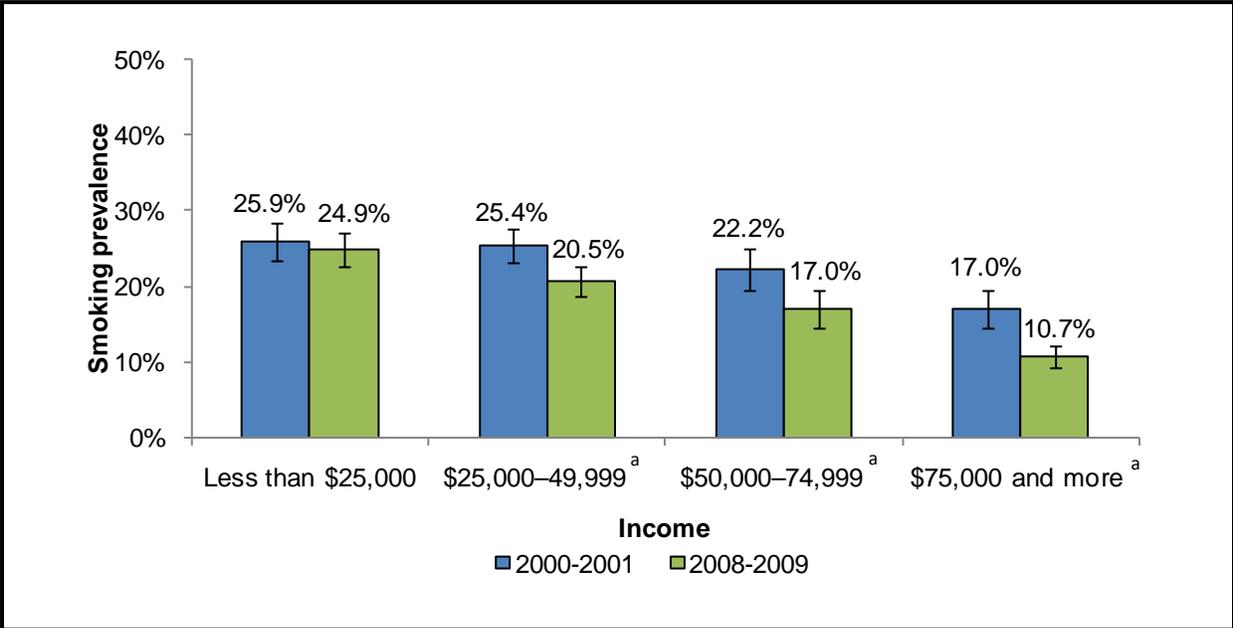
Figure 4. Smoking Prevalence by Education, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

The statistically significant declines in smoking prevalence among adults with household incomes greater than \$25,000 translate to relative declines of 19% (\$25,000 to \$49,999), 24% (\$50,000 to \$74,999), and 37% (\$75,000 or more) (Figure 5). There was no change in smoking prevalence among adults earning less than \$25,000. As shown, smoking prevalence decreases with increasing income.

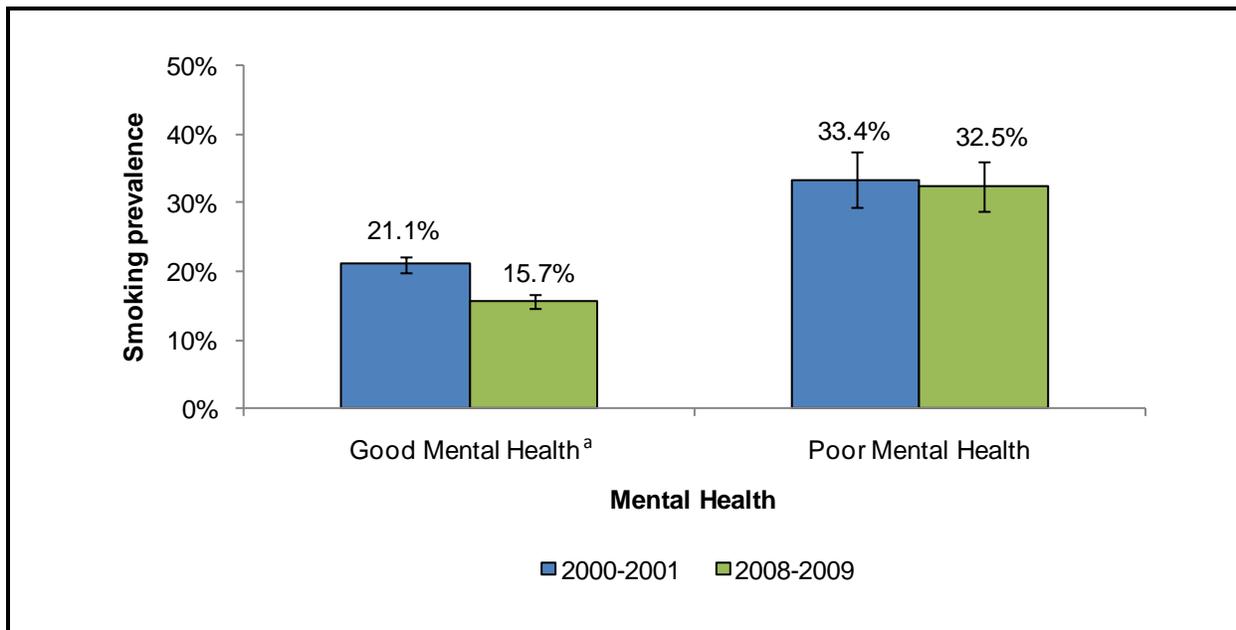
Figure 5. Smoking Prevalence by Income, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

Smoking prevalence differs between adults with good mental health and those with poor mental health (Figure 6). Adults with poor mental health consistently have higher levels of smoking prevalence than those with good mental health. Adults with good mental health report statistically significant declines in smoking prevalence from 2000–2001 to 2008–2009. Relative to 2000–2001, smoking prevalence in 2008–2009 declined 25% among adults with good mental health. There was no change in smoking prevalence among adults with poor mental health.

Figure 6. Smoking Prevalence by Mental Health, 2000–2001 and 2008–2009 BRFSS

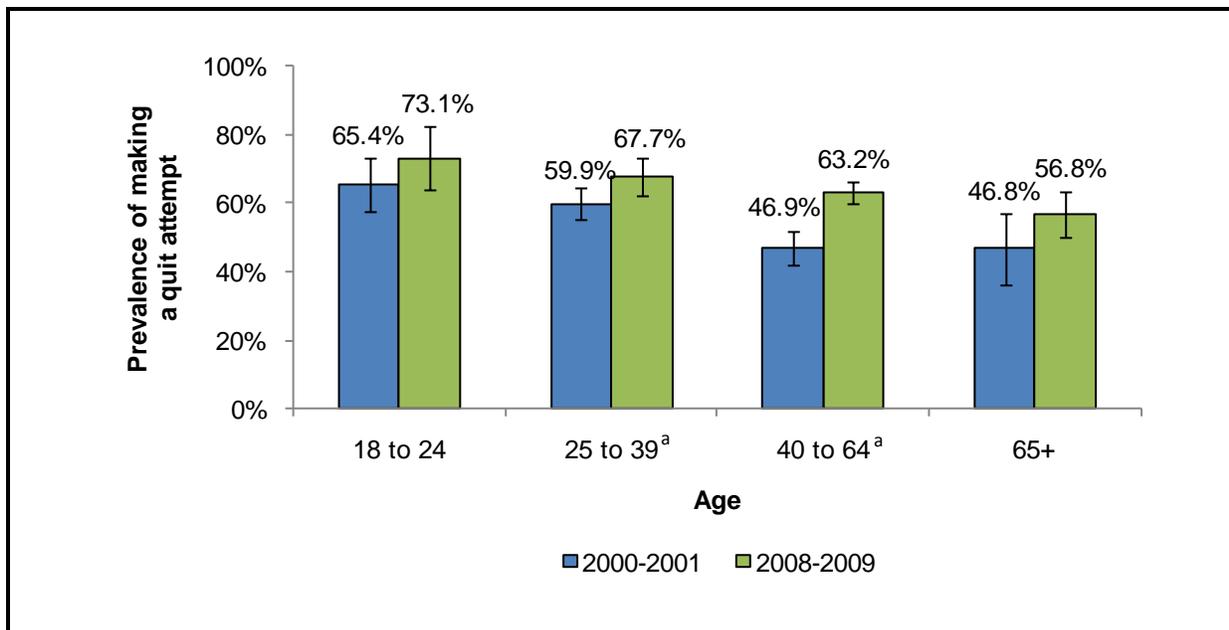


^a Statistically significant difference between 2000–2001 and 2008–2009.

4.3 Quit Attempts

Smokers aged 25 to 39 and 40 to 64 reported statistically significant increases in the prevalence of quit attempts between 2000–2001 and 2008–2009 (Figure 7). Relative to 2000–2001, quit attempts in 2008–2009 increased by 13% among 25- to 39-year-olds and 35% among 40- to 64-year-olds.

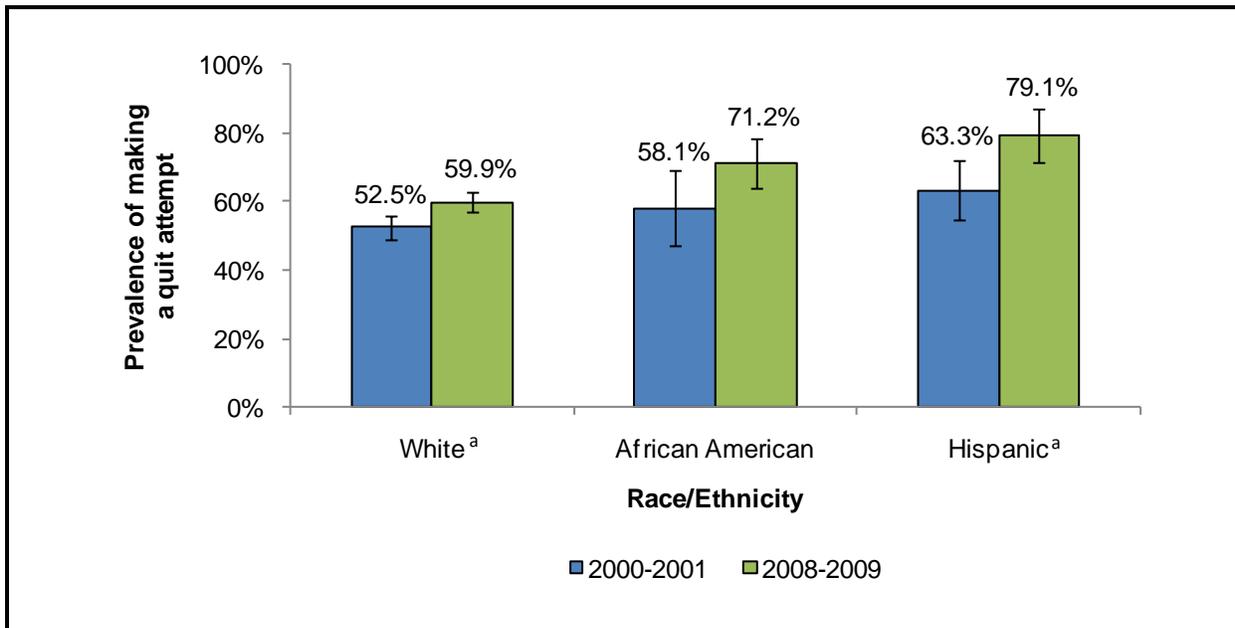
Figure 7. Prevalence of Making at Least One Quit Attempt among Smokers by Age, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

Both white and Hispanic adults report statistically significant increases in quit attempts between 2000–2001 and 2008–2009 (Figure 8). Relative to 2000–2001, the prevalence of quit attempts in 2008–2009 increased by 14% among whites and 25% among Hispanic adults.

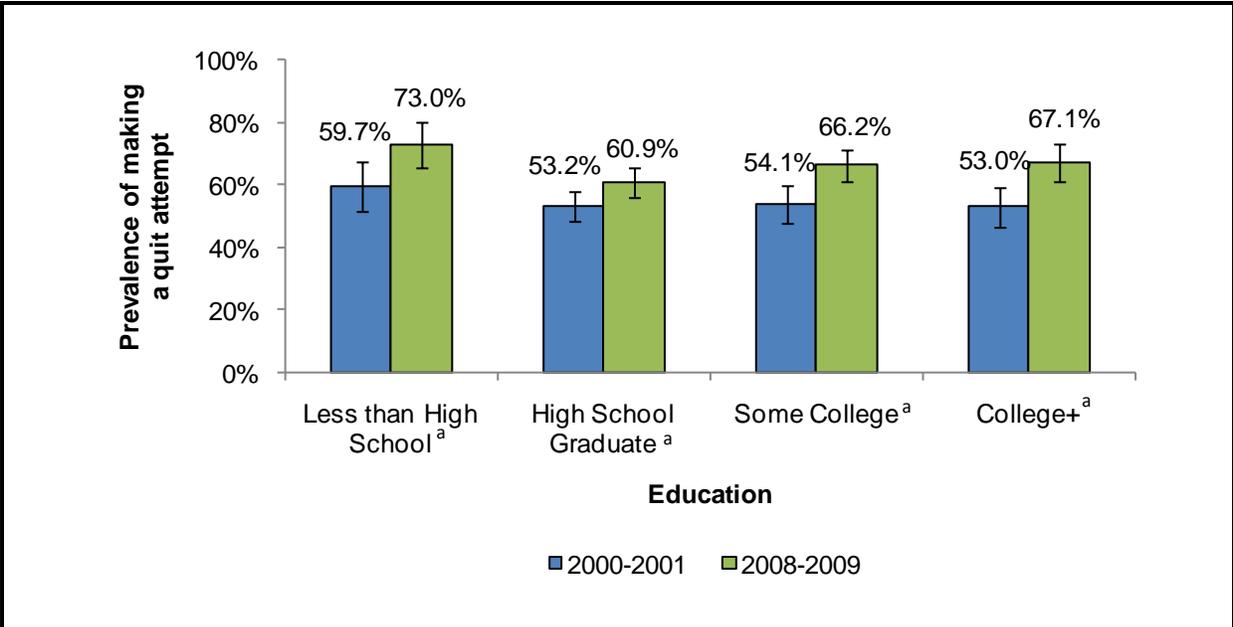
Figure 8. Prevalence of Making at Least One Quit Attempt among Smokers by Race/Ethnicity, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

The prevalence of quit attempts increased over time across all education levels (Figure 9). Between 2000–2001 and 2008–2009, the prevalence of quit attempts increased by 22% among adults who have less than a high school education, 14% among high school graduates, 23% among those with some college education, and 27% among college graduates.

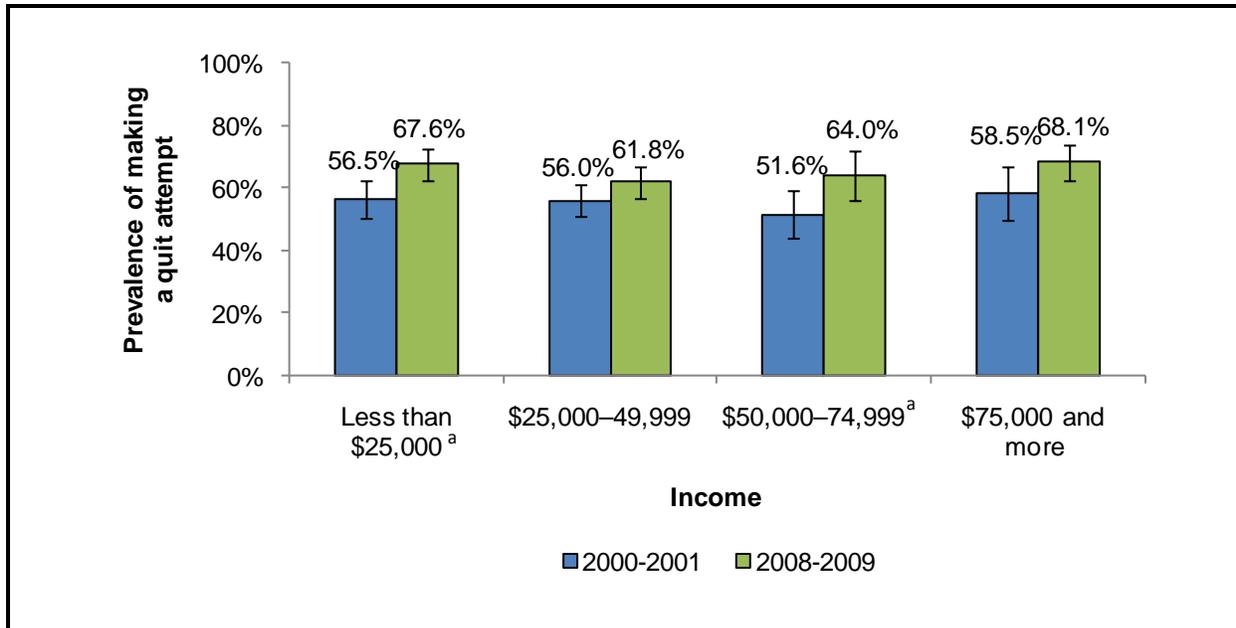
Figure 9. Prevalence of Making at Least One Quit Attempt among Smokers by Education, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

Among adults with household incomes less than \$25,000 and between \$50,000 and \$74,999, there was a statistically significant increase in the prevalence of quit attempts from 2000–2001 to 2008–2009 (Figure 10). Between 2000–2001 and 2008–2009, the prevalence of quit attempts increased by 20% among adults with annual household incomes less than \$25,000 and 24% among adults making \$50,000 to \$74,999.

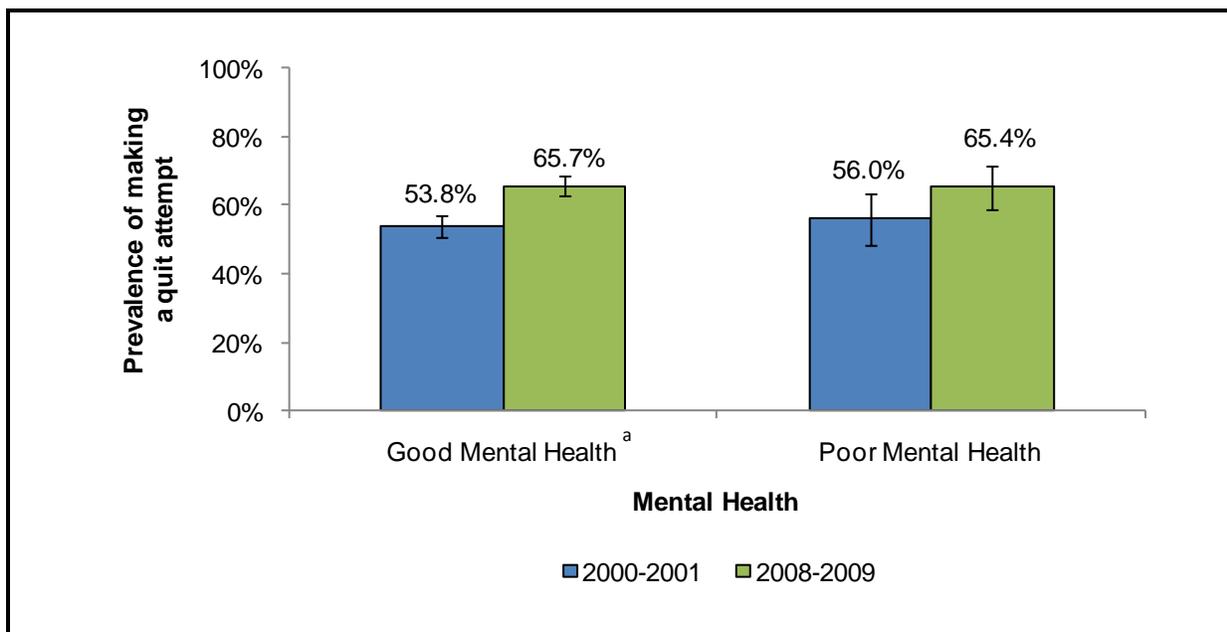
Figure 10. Prevalence of Making at Least One Quit Attempt among Smokers by Income, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

Between 2000–2001 and 2008–2009, adults with good mental health report a statistically significant increase in quit prevalence (Figure 11). Relative to 2000–2001, the prevalence of quit attempts in 2008–2009 increased by 22% among those with good mental health.

Figure 11. Prevalence of Making at Least One Quit Attempt among Smokers by Mental Health, 2000–2001 and 2008–2009 BRFSS



^a Statistically significant difference between 2000–2001 and 2008–2009.

5. STRATEGIES AND INFLUENCES ON SMOKING

In this section, we present strategies for and influences on smoking cessation by age, race/ethnicity, education, income, and mental health. This section illustrates differences in cessation strategy use (e.g., receive assistance by a health care provider in a quit attempt, use cessation medications, receive counseling) by various demographics. This section also illustrates differences in media awareness.

5.1 Received Assistance with Quit Attempt

The percentage of adults who were assisted with a quit attempt by their health care provider does not differ significantly by age (Figure 12). We see no significant differences in assistance with quit attempts by race/ethnicity (Figure 13).

Figure 12. Percentage of Smokers Who Were Assisted with a Quit Attempt by their Health Care Provider by Age, 2008–2009 ATS

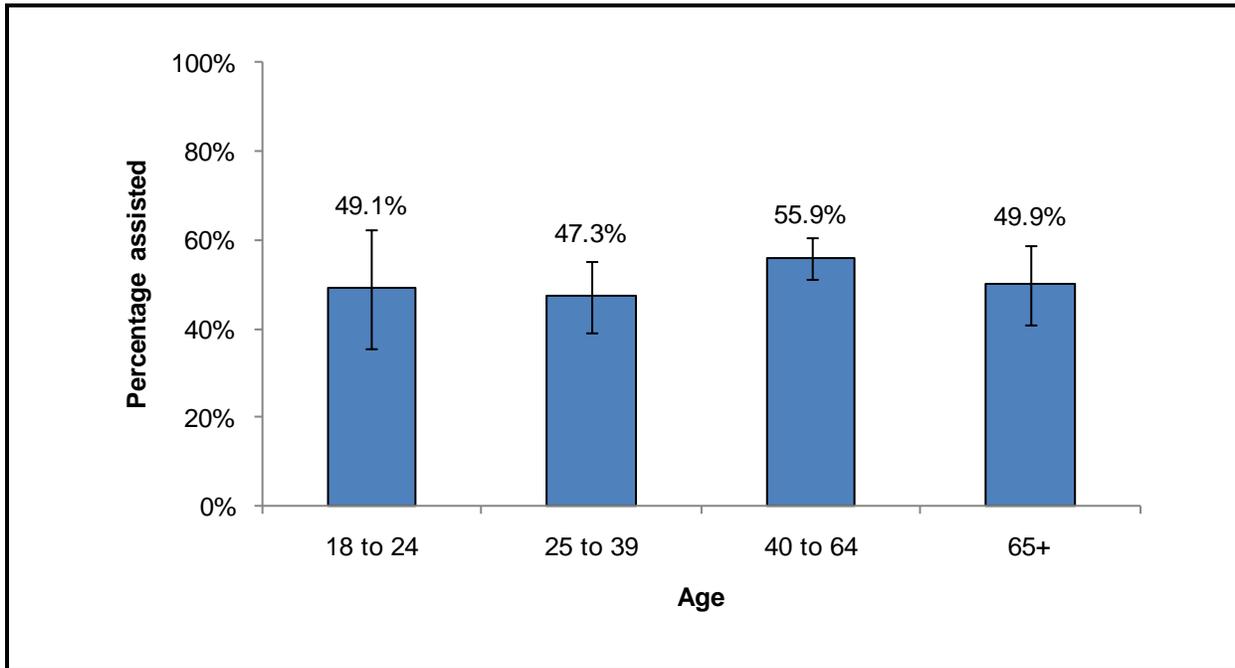
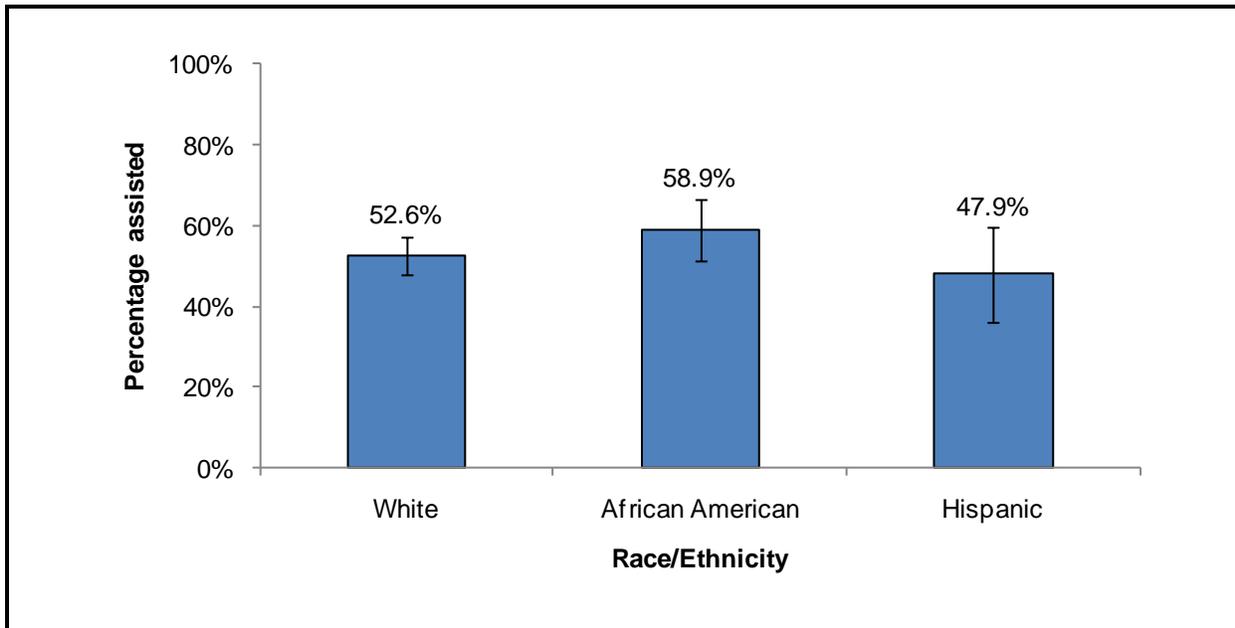
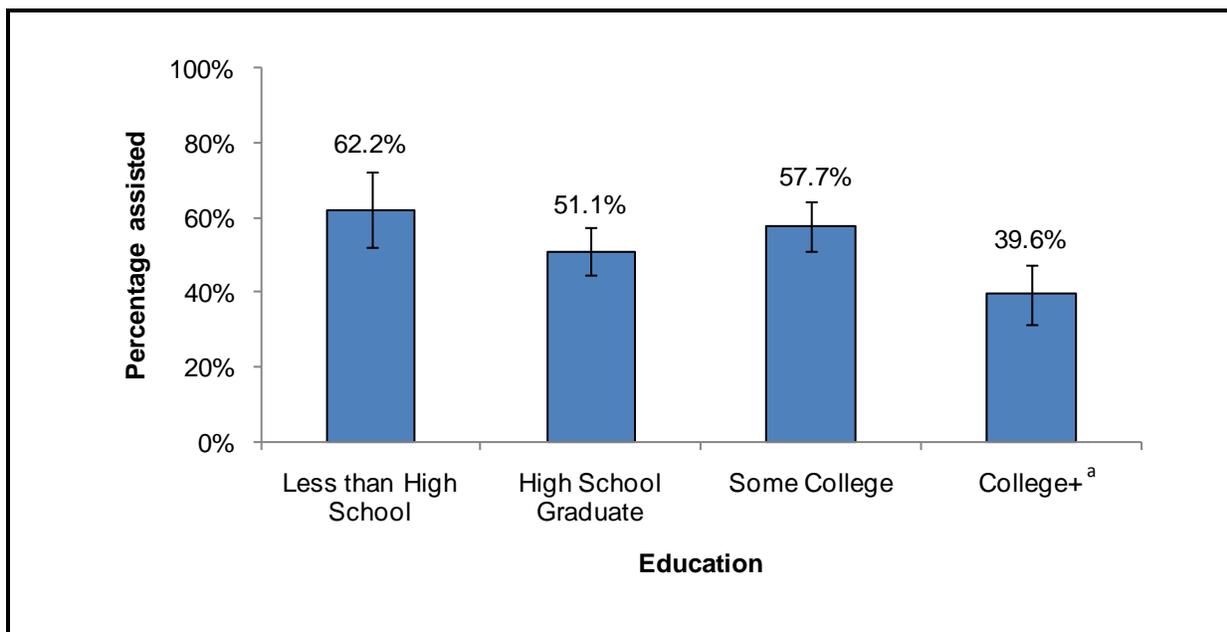


Figure 13. Percentage of Smokers Who Were Assisted with a Quit Attempt by their Health Care Provider by Race/Ethnicity, 2008–2009 ATS



With respect to education, a higher percentage of adult smokers with less than a college degree received assistance from a health care provider in making a quit attempt compared to those with a college degree (Figure 14).

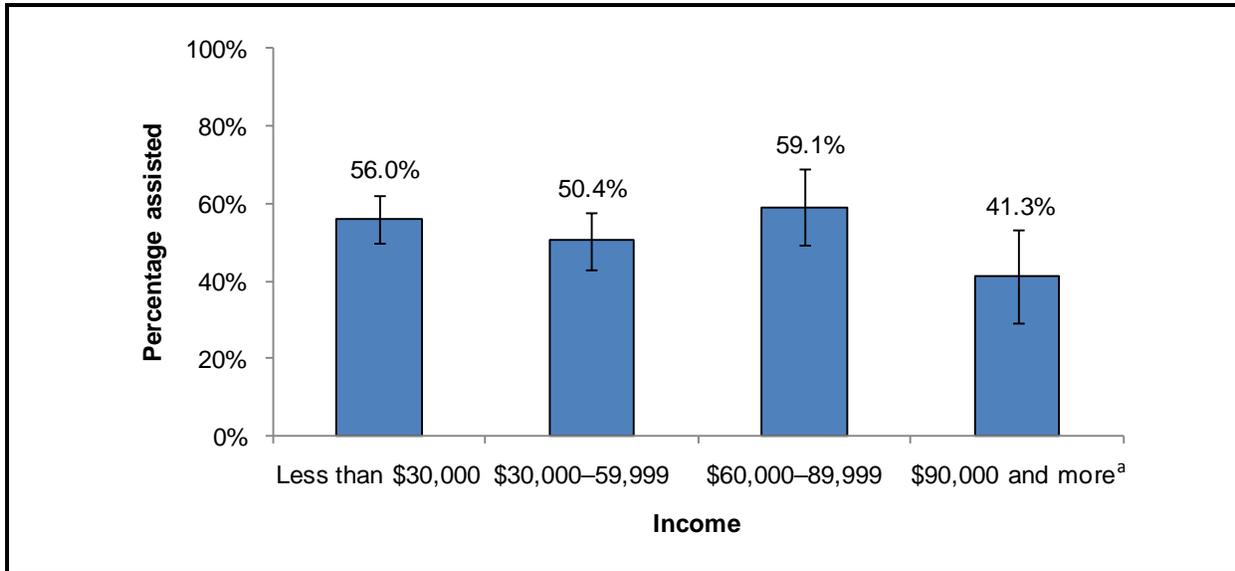
Figure 14. Percentage of Smokers Who Were Assisted with a Quit Attempt by their Health Care Provider by Education, 2008–2009 ATS



^a Statistically significant difference between those with at least a college degree and all other educational levels.

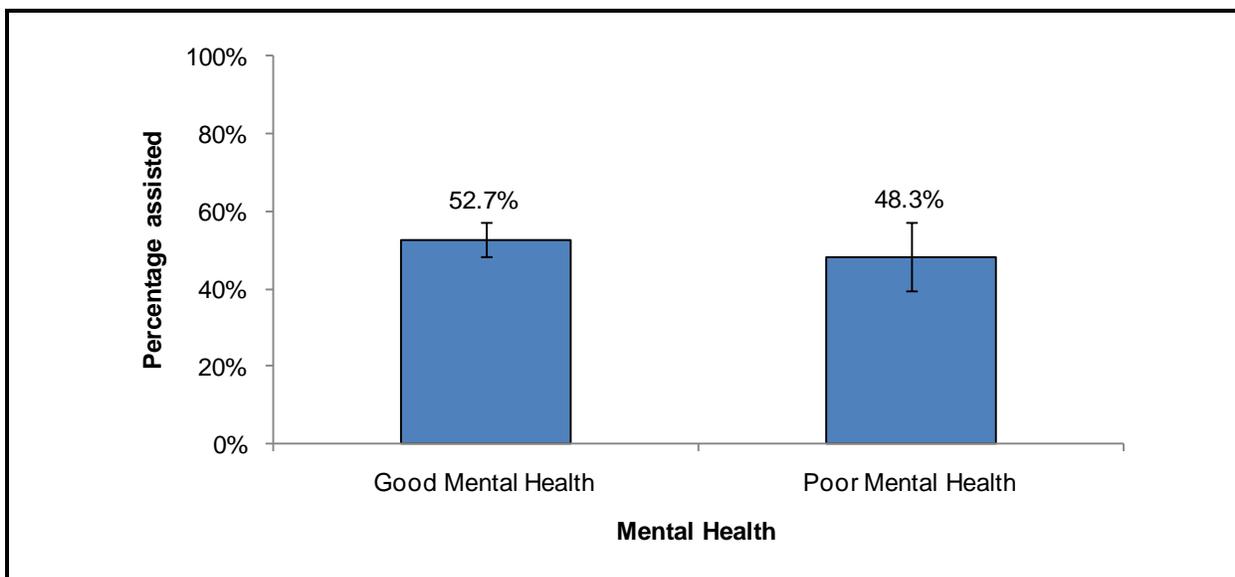
The percentage of adults who were assisted in a quit attempt by a health care provider was significantly higher for adults with incomes less than \$30,000 or between \$60,000 and \$89,999 than for adults with incomes \$90,000 or more (Figure 15). The percentage of adults receiving help for their quit attempt from a health care provider does not differ significantly by mental health status (Figure 16).

Figure 15. Percentage of Smokers Who Were Assisted with a Quit Attempt by their Health Care Provider by Income, 2008–2009 ATS



^a Statistically significant difference between those earning \$90,000 or more and those earning less than \$30,000 or \$60,000–\$89,999.

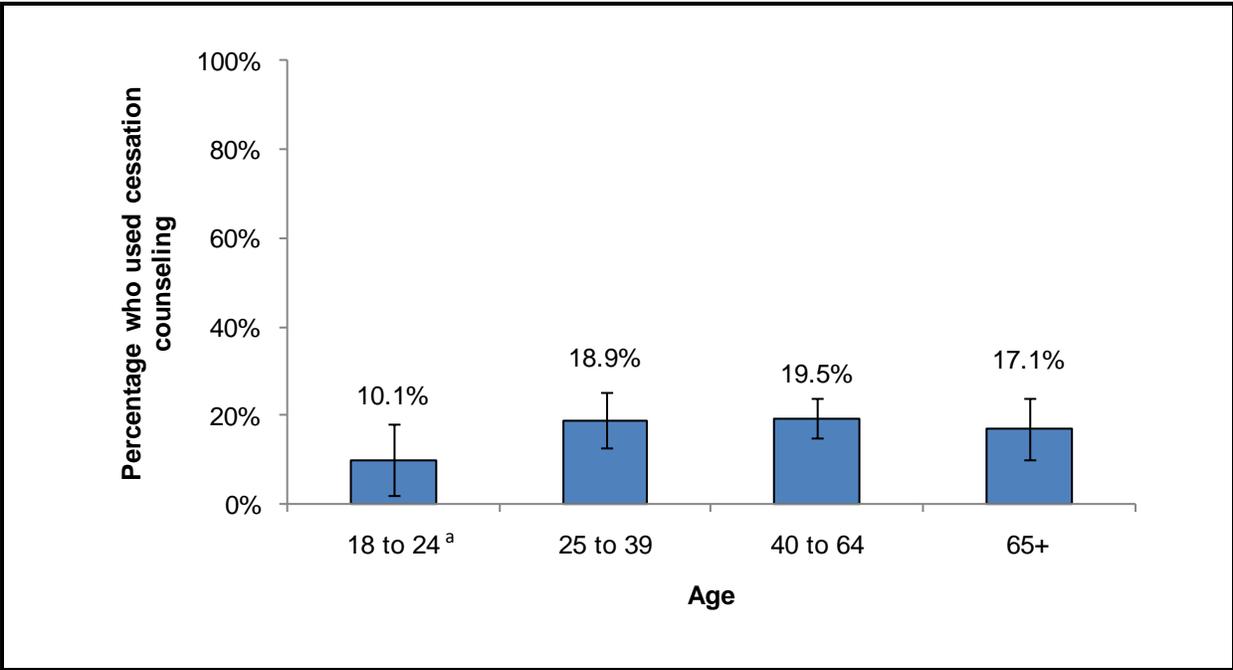
Figure 16. Percentage of Smokers Who Were Assisted with a Quit Attempt by their Health Care Provider by Mental Health, 2008–2009 ATS



5.2 Received Cessation Counseling

A significantly lower percentage of adults aged 18 to 24 used cessation counseling during their last quit attempt than those aged 40 to 64 (Figure 17). Cessation counseling rates do not differ significantly by race/ethnicity (Figure 18), education (Figure 19), or income (Figure 20). However, a significantly higher percentage of those with poor mental health use cessation counseling than those with good mental health (Figure 21).

Figure 17. Percentage of Smokers Who Used Cessation Counseling in their Last Quit Attempt by Age, 2008–2009 ATS



^a Statistically significant difference between 18- to 24-year-olds and 40- to 64-year-olds.

Figure 18. Percentage of Smokers Who Used Cessation Counseling in their Last Quit Attempt by Race/Ethnicity, 2008–2009 ATS

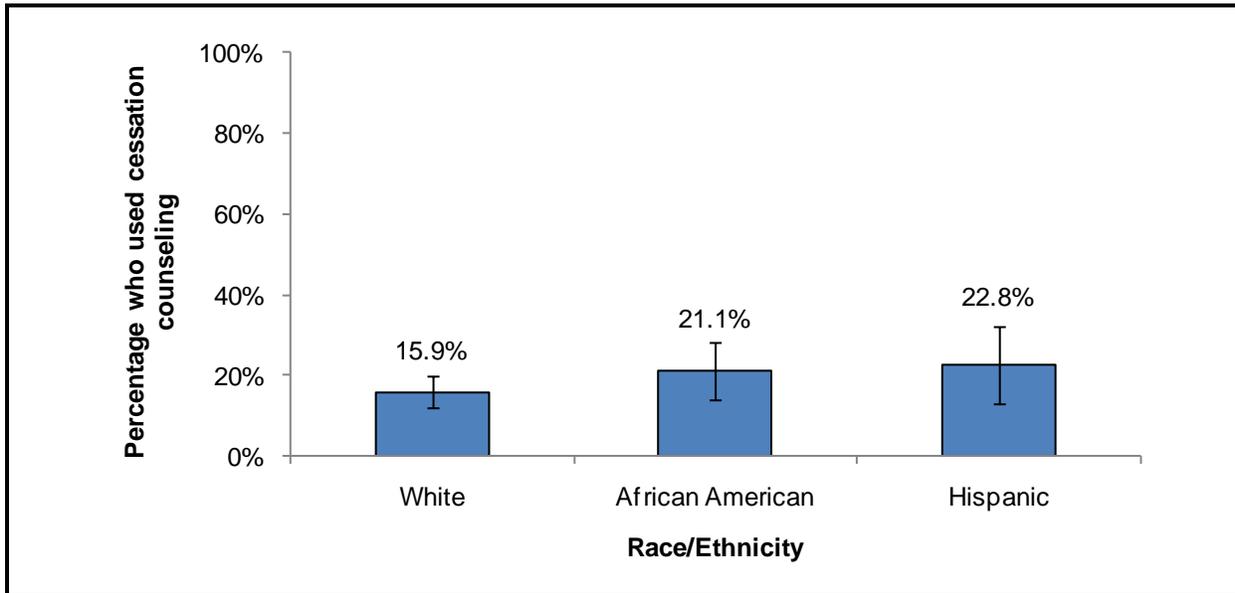


Figure 19. Percentage of Smokers Who Used Cessation Counseling in their Last Quit Attempt by Education, 2008–2009 ATS

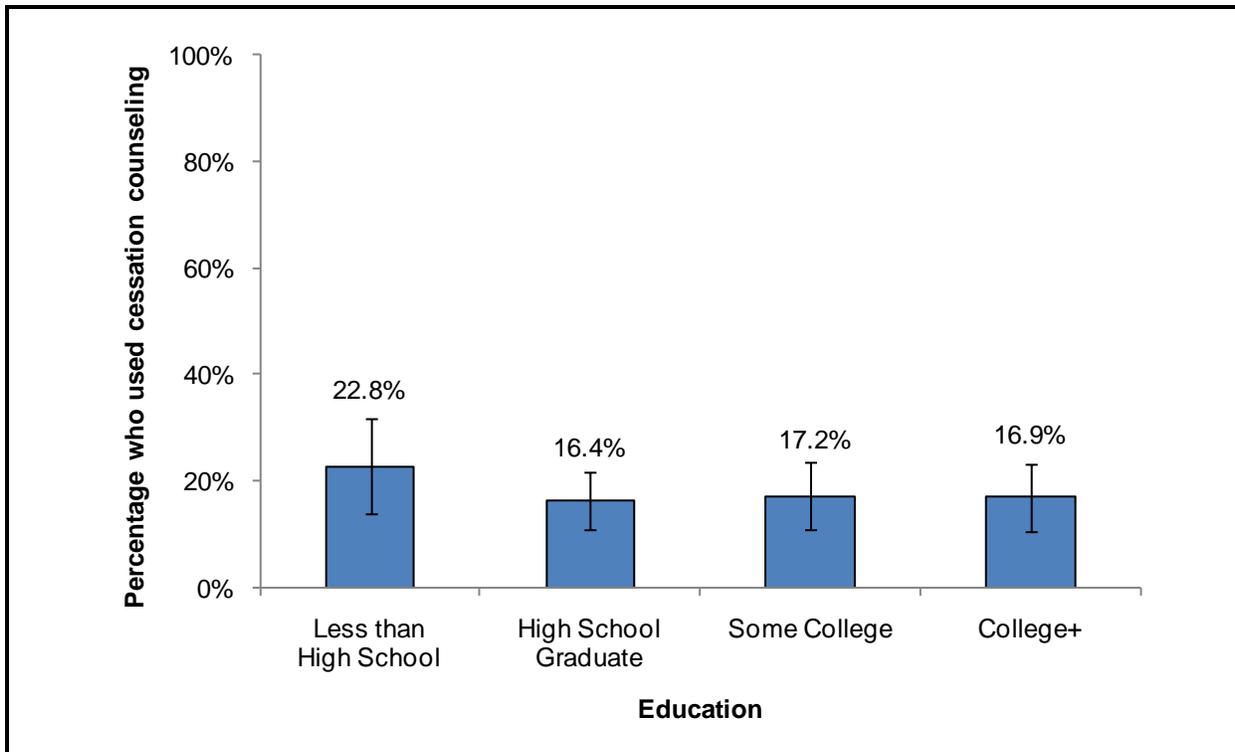


Figure 20. Percentage of Smokers Who Used Cessation Counseling in their Last Quit Attempt by Income, 2008–2009 ATS

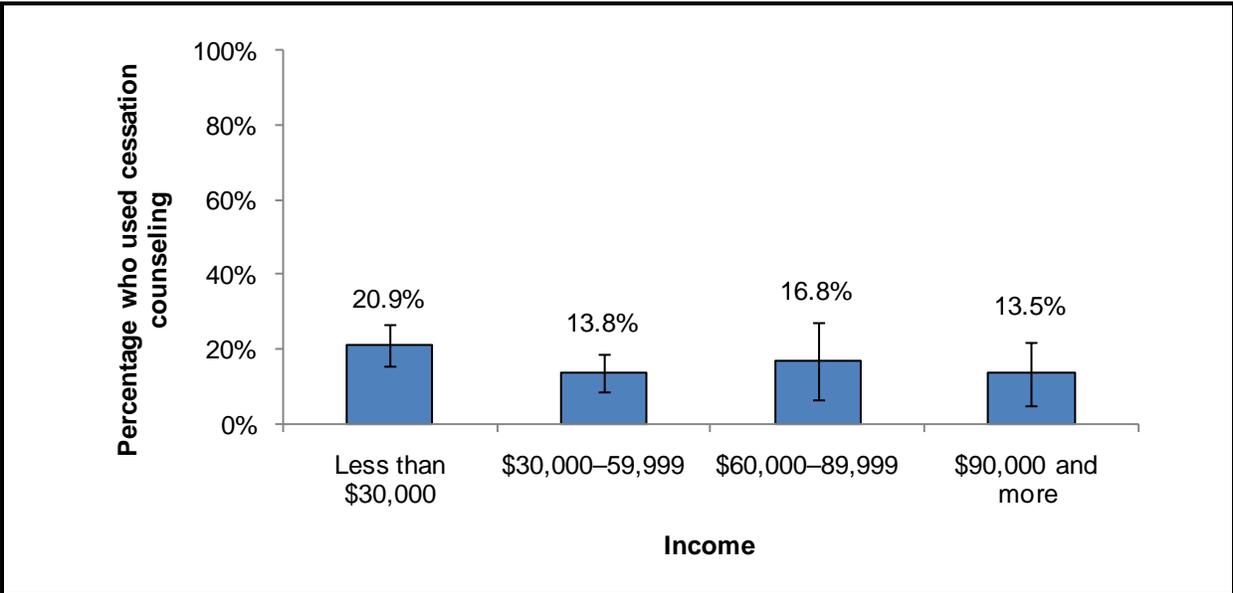
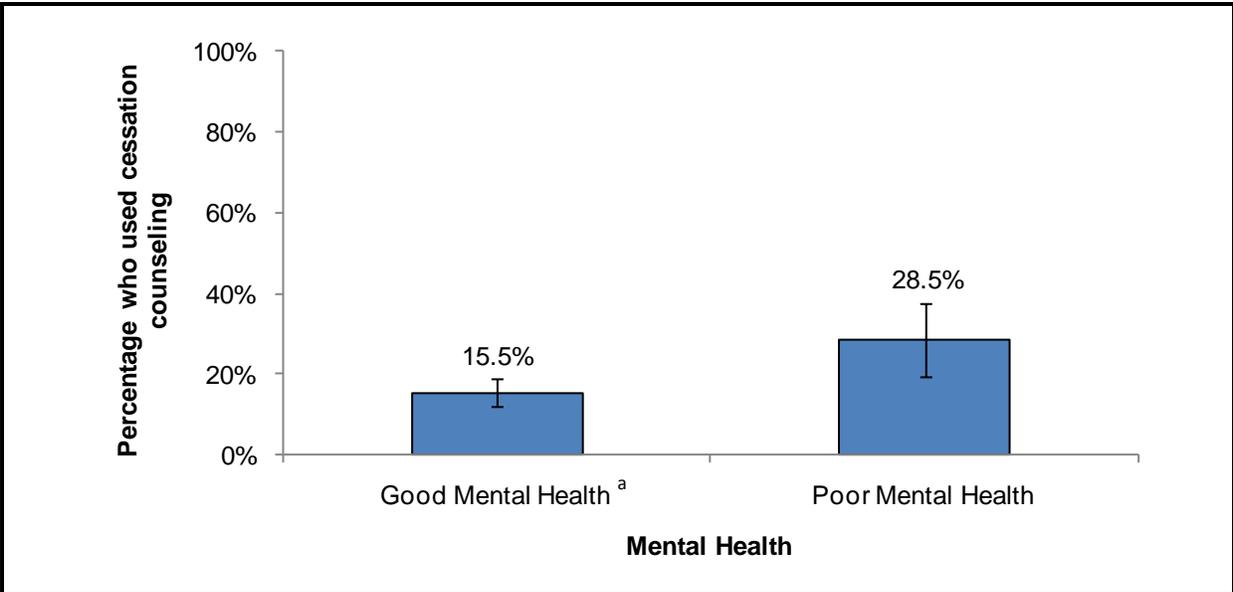


Figure 21. Percentage of Smokers Who Used Cessation Counseling in their Last Quit Attempt by Mental Health, 2008–2009 ATS

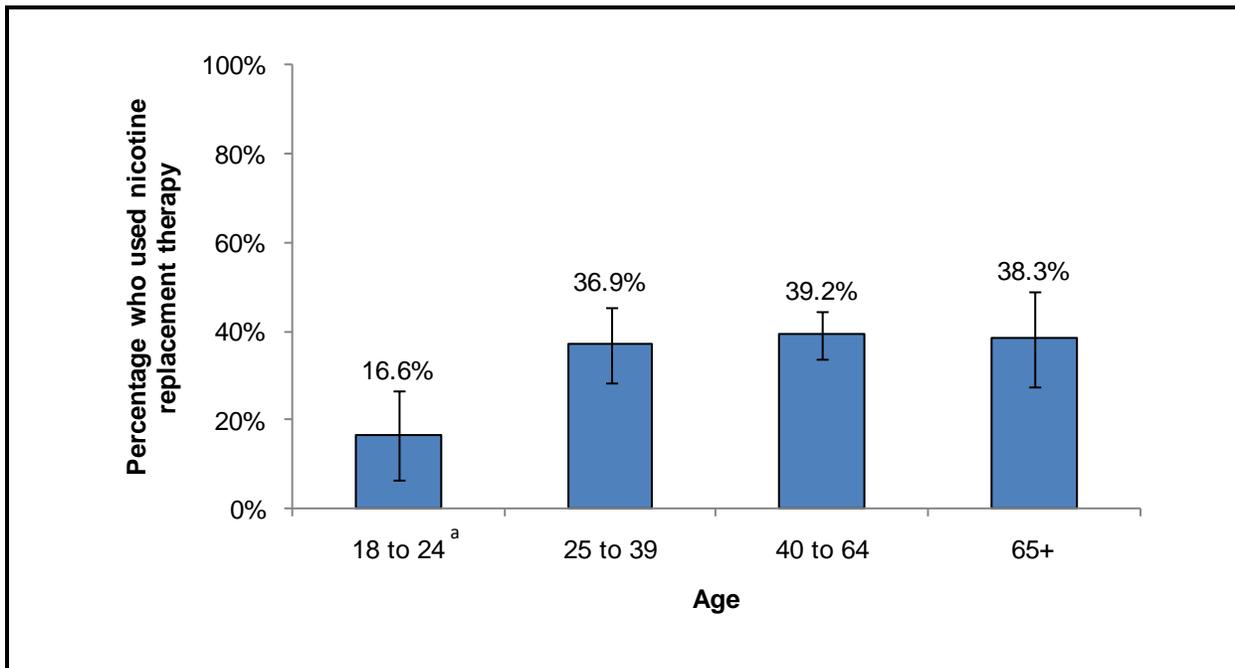


^a Statistically significant difference between good mental health and poor mental health.

5.3 Used Cessation Medications

As shown in Figure 22, a significantly lower percentage of smokers aged 18 to 24 reported using cessation medications during their last quit attempt compared with adults in older age categories. The use of cessation medications did not vary significantly by race/ethnicity (Figure 23), education (Figure 24), or income (Figure 25). However, those with good mental health reported significantly lower use of cessation medications than those with poor mental health (Figure 26).

Figure 22. Percentage of Smokers Who Used Nicotine Replacement Therapy in their Last Quit Attempt by Age, 2008–2009 ATS



^a Statistically significant difference between 18- to 24-year-olds and all other age groups.

Figure 23. Percentage of Smokers Who Used Nicotine Replacement Therapy in their Last Quit Attempt by Race/Ethnicity, 2008–2009 ATS

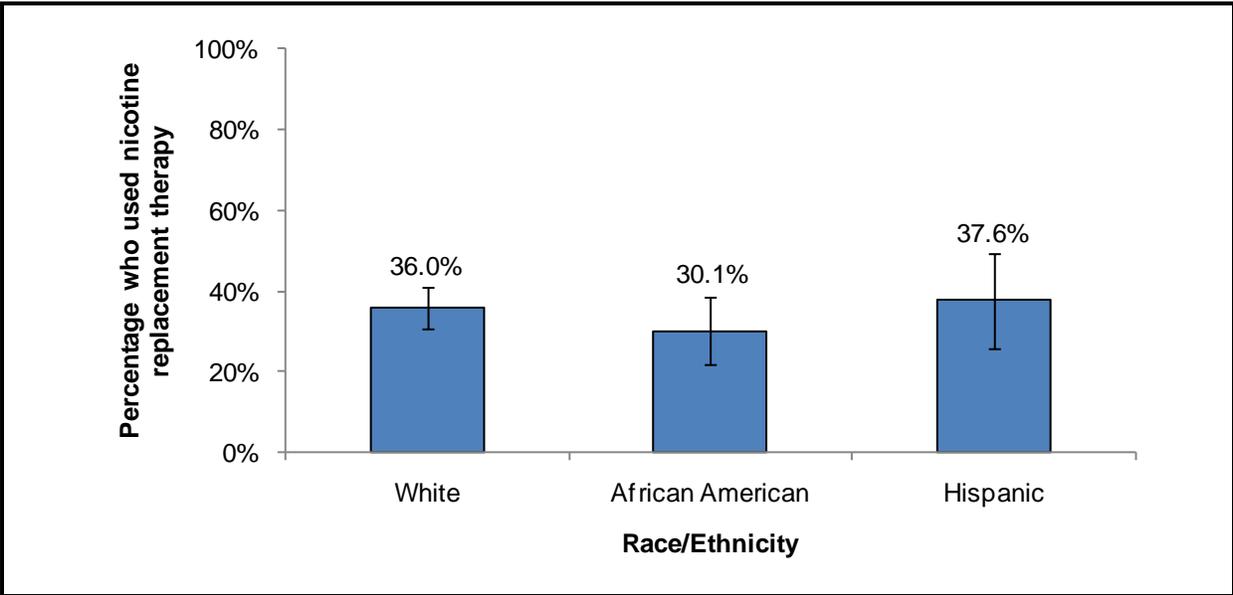


Figure 24. Percentage of Smokers Who Used Nicotine Replacement Therapy in their Last Quit Attempt by Education, 2008–2009 ATS

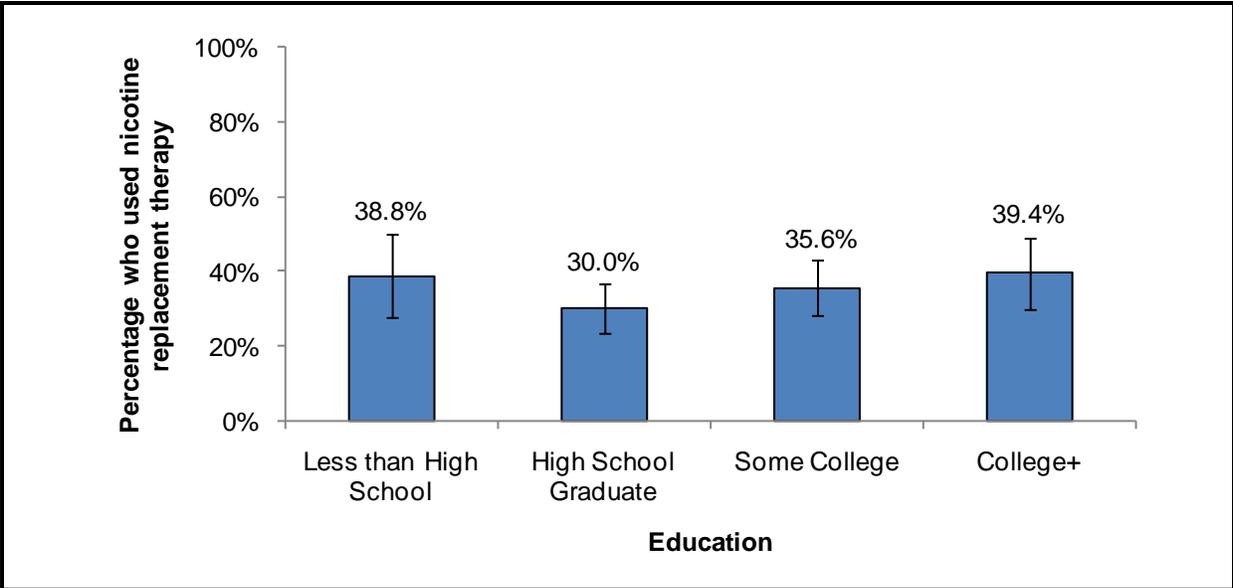


Figure 25. Percentage of Smokers Who Used Nicotine Replacement Therapy in their Last Quit Attempt by Income, 2008–2009 ATS

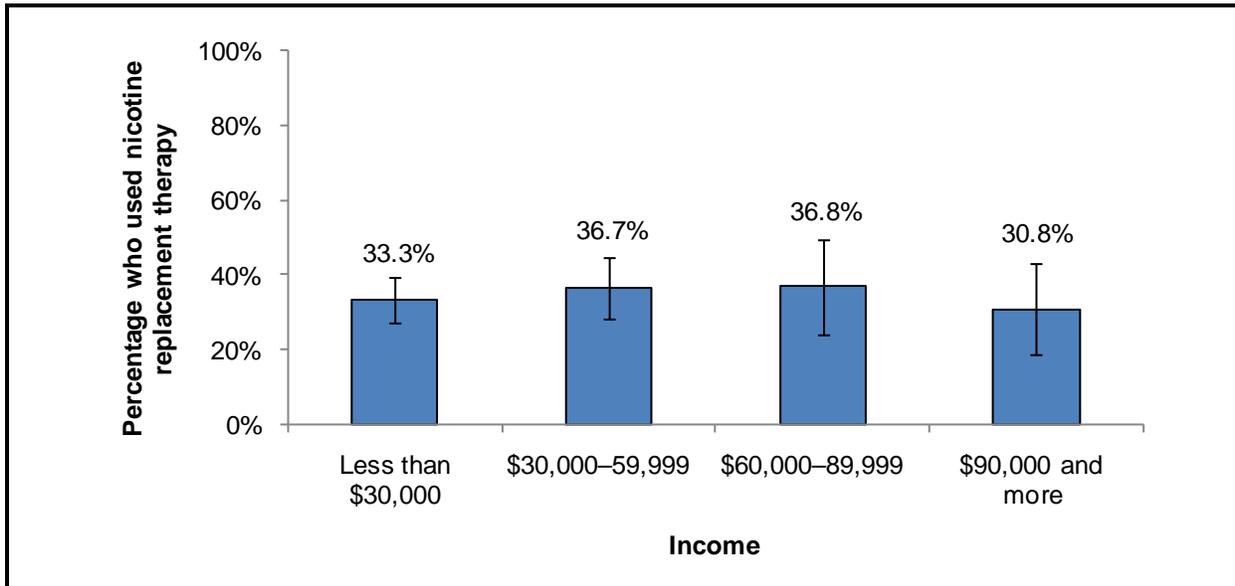
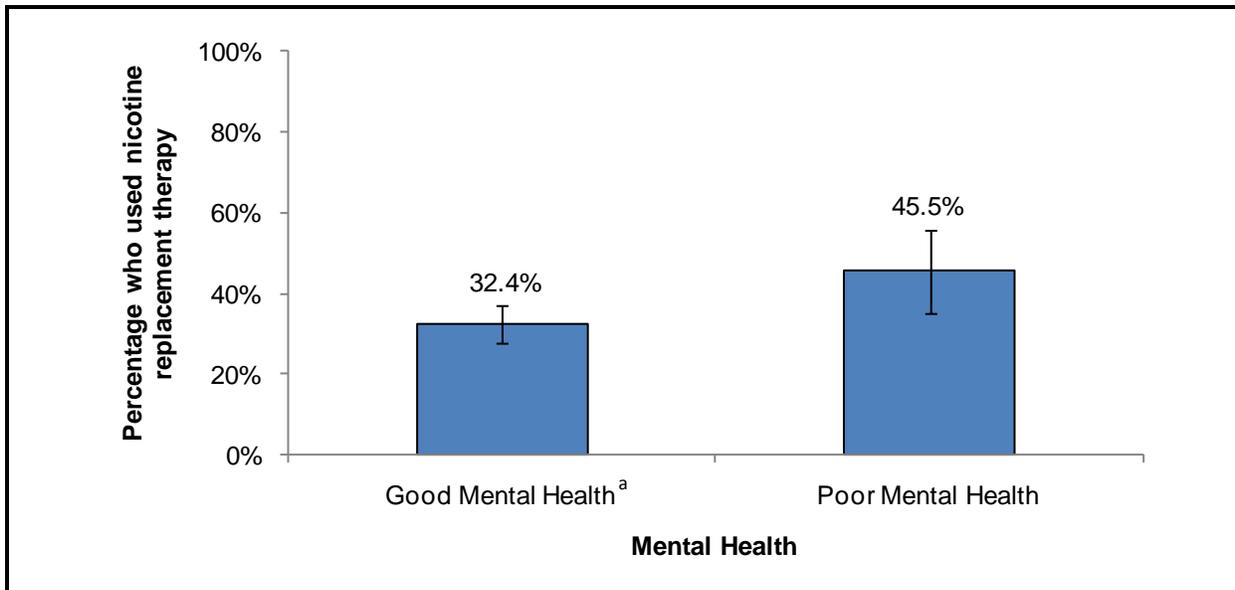


Figure 26. Percentage of Smokers Who Used a Nicotine Replacement Therapy in their Last Quit Attempt by Mental Health, 2008–2009 ATS

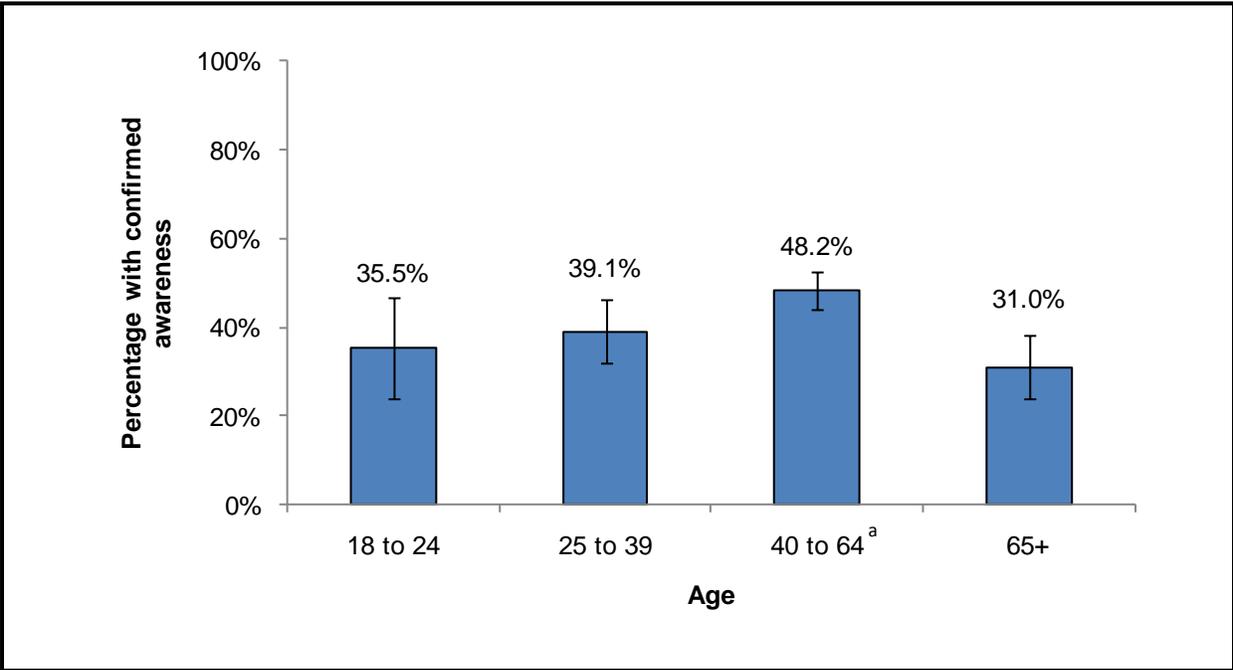


^a Statistically significant difference between good mental health and poor mental health.

5.4 Confirmed Awareness of Antitobacco Television Advertisements

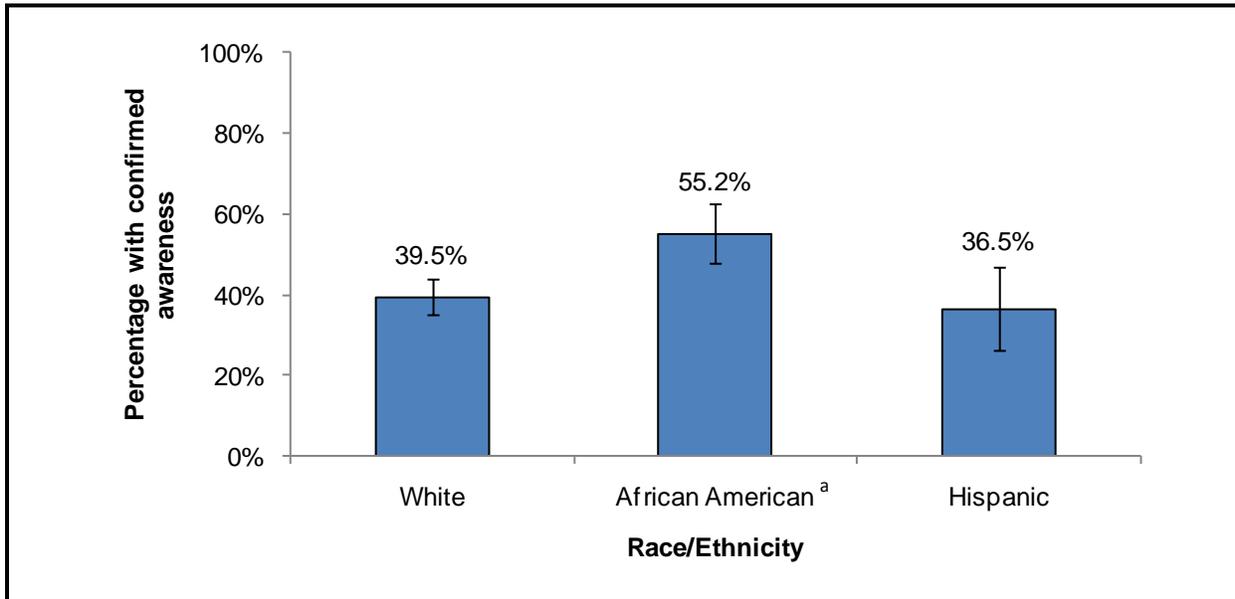
A significantly higher percentage of adults aged 40 to 64 are aware of antitobacco television advertisements than those in any other age category (Figure 27). Additionally, a significantly higher percentage of African American adults are aware of antitobacco television ads than white or Hispanic adults (Figure 28). Awareness of advertisements does not differ significantly by education (Figure 29), income (Figure 30), or mental health (Figure 31).

Figure 27. Percentage of Smokers with Confirmed Awareness of Antitobacco Television Advertisements by Age, 2008–2009 ATS



^a Statistically significant difference between 40- to 64-year-olds and all other age groups.

Figure 28. Percentage of Smokers with Confirmed Awareness of Antitobacco Television Advertisements by Race/Ethnicity, 2008–2009 ATS



^a Statistically significant difference between African American adults and white or Hispanic adults.

Figure 29. Percentage of Smokers with Confirmed Awareness of Antitobacco Television Advertisements by Education, 2008–2009 ATS

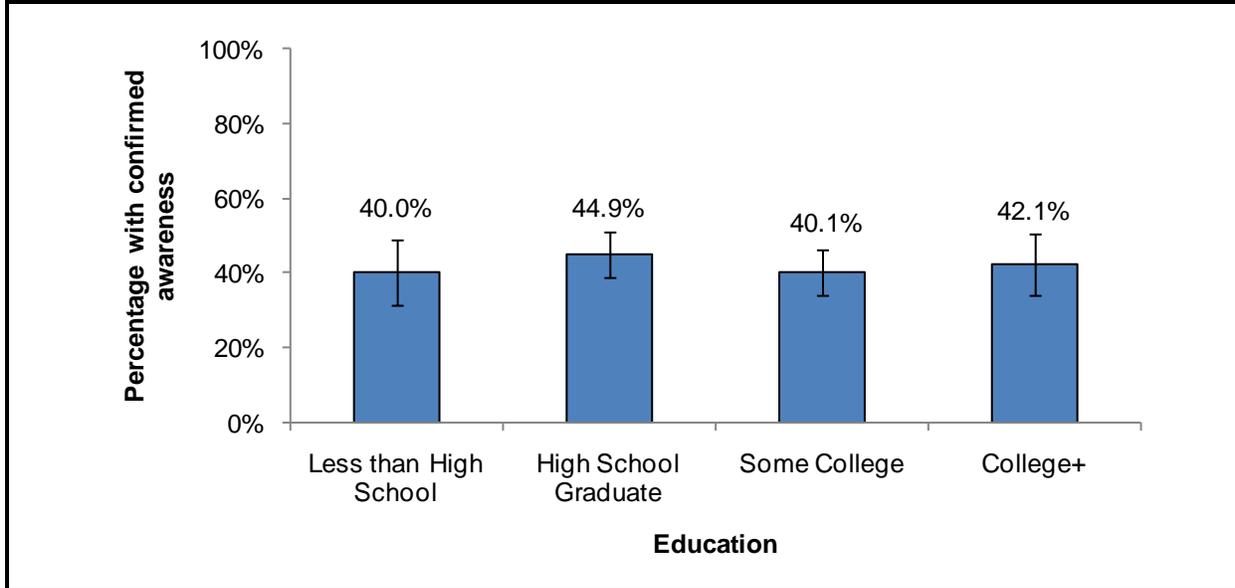


Figure 30. Percentage of Smokers with Confirmed Awareness of Antitobacco Television Advertisements by Income, 2008–2009 ATS

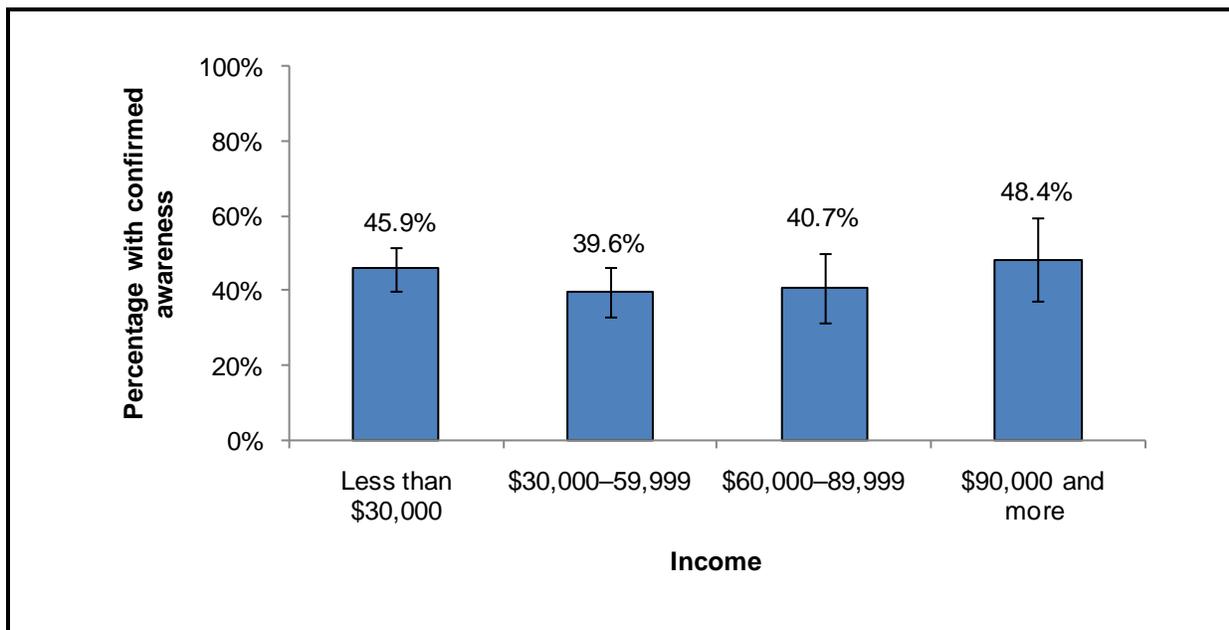
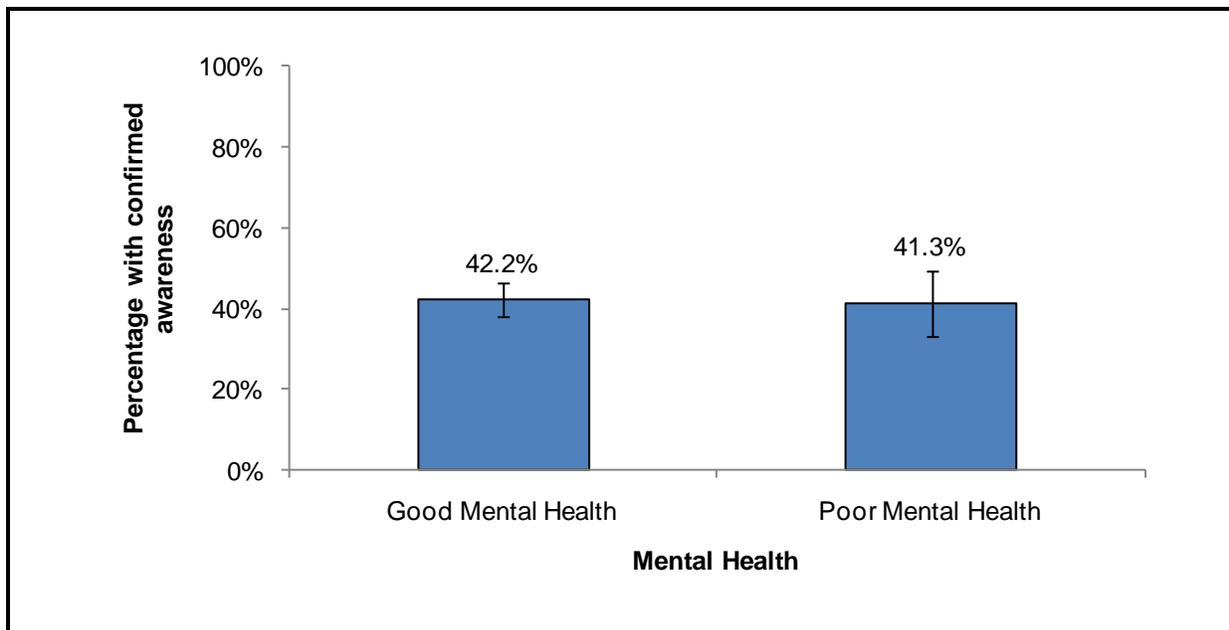


Figure 31. Percentage of Smokers with Confirmed Awareness of Antitobacco Television Advertisements by Mental Health, 2008–2009 ATS



6. DISCUSSION

Overall, we see that the prevalence of current smoking declined from 22.4% in 2000–2001 to 17.4% in 2008–2009. This is a relative decline of 22% in the New York adult smoking rate. Research indicates that declines in the rates of adult and youth smoking in New York State have outpaced national rates of decline (RTI, 2010).

However, as this report illustrates, the decline in the adult smoking rate over the past decade was not evenly distributed across demographic groups. For example, the prevalence of smoking remained unchanged for African American adults and for adults who have less than a high school education, low incomes, and poor mental health.

The smoking rate among young adults aged 18 to 24 declined almost 40% in the past decade. This is most striking when compared with the 10% decline among adults aged 40 to 64. However, the latter group report the highest increase in quit attempts at nearly 35% from 2000–2001 to 2008–2009. One possible explanation for the increase in quit attempts is that this group is more aware of antitobacco media than all other age groups. The increase in quit attempts, yet relatively small decrease in smoking prevalence, suggests that the 40 to 64 age group struggles with relapse more than other age groups. Although smoking prevalence has decreased substantially among young adults, they are less likely to receive assistance when quitting or to use cessation medications.

The marked decrease in the young adult smoking rate likely is the result of the significant decline in youth smoking initiation in New York State rather than any increases in smoking cessation among this age group over time. Between 2000 and 2008, the high school smoking rate decreased nearly 50% from 27.1% to 14.7% (Watson, Busey, & Farrelly, 2010). Another contributor may be undercoverage of young adults living in wireless-only households. Evidence suggests that adults living in cell-phone only households are more likely to smoke cigarettes (Blumberg, Luke, & Cynamon, 2006). Furthermore, Delnevo, Gundersen, and Hagman (2007) suggest that young adult smoking prevalence is underestimated due to undercoverage of this cell-phone- or wireless-only population in landline-based surveys.

Turning to differences in these patterns by race and ethnicity, we find that the observed declines in smoking prevalence overall appear to be driven largely by declines among white and Hispanic adults. Although smoking prevalence declined 20% to 25% among white and Hispanic adults between 2000–2001 and 2008–2009, there was no change among African American adults. Despite this pattern, the prevalence of quit attempts increased nearly 25% for both Hispanic and African American adults over this same period, but only 14% among white adults. In addition, awareness of antitobacco media is significantly higher among African American adults than white and Hispanic adults. This too suggests that the New York

Tobacco Control Program (NY TCP) is reaching African American adults with their messages, and they are making quit attempts but struggling not to relapse.

College graduates report a 37% decline in current smoking between 2000–2001 and 2008–2009. This change over time is nearly double that of the decline seen in high school graduates (19%) and those with some college (17%). College graduates are less likely to be smokers and are less likely to receive assistance quitting from health care providers than those with less education. There were no differences by education level in other factors that influence smoking prevalence and smoking cessation, such as use of NRT, cessation counseling, or exposure to antitobacco media.

From 2000–2001 to 2008–2009, the largest decline in smoking by income group was for those with household incomes of \$75,000 or more (–37%), followed by those with household incomes of \$50,000 to \$74,999 (–24%) and \$25,000 to \$49,999 (–19%). Those with incomes less than \$25,000 had no significant change in smoking rates. However, this latter group did have an increase in quit attempts over this period of 20%, as did those with household incomes of \$25,000 to \$49,999 (+24%). As we have noted with other demographic characteristics, increases in quit attempts do not always translate into reduced prevalence. Of note, respondents with lower incomes are more likely to be assisted with quit attempts by health care providers than those with higher incomes (i.e., \$90,000 or more). As with education, there were no other differences across income groups in factors that influence smoking prevalence and smoking cessation.

While smoking prevalence declined by 25% among those with good mental health, there was relatively no change among those with poor mental health. From 2000–2001 to 2008–2009, the prevalence of quit attempts increased for both those with good (+22%) and poor mental health (+17%). Among the quit strategies, those with poor mental health reported more use of NRT during their last quit attempt and higher participation rates in quit counseling.

This report highlights that while smoking prevalence decreased substantially overall, this progress was not evenly distributed among all demographic groups. This was true despite increases in the prevalence of quit attempts across most demographic groups, suggesting that success in smoking cessation is also variable across groups. Finally, although we examined a number of potential influences on smoking cessation that could help explain these patterns, no consistent patterns emerged, highlighting the need for further research (see Appendix A for a summary of the patterns).

The positive trends in smoking and smoking cessation over the past decade in New York, especially in contrast to stalled national trends, point to a decade of successful tobacco control efforts in New York. However, despite this success, additional efforts will be needed to ensure that all demographic groups become tobacco free, including African American adults and adults with lower educational attainment, low incomes, and poor mental health.

As noted in the 2010 Independent Evaluation Report (RTI, 2010), the severe cuts to the NY TCP budget in fiscal years 2009–2010 and 2010–2011 threaten the recent successes and make it challenging to address the disparities identified in the current report.

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APPENDIX A: SUMMARY OF FINDINGS

Table A-1 provides a summary of trends in smoking prevalence and the prevalence of making a quit attempt from 2000–2001 to 2008–2009. In addition, this table indicates changes in influences on smoking and smoking cessation. As an example, examining the age group 18 to 24, we see a significant decrease in current smoking between 2000–2001 and 2008–2009 (“–”), that 18- to 24-year-olds are less likely to receive counseling than 40- to 64-year-olds (“< 40 to 64”), and that 18- to 24-year-olds are less likely to use cessation medication than all other age groups (“< all others”).

Table A-1. Summary of Biannual and Categorical Differences by Demographics, BRFSS and ATS

	Biannual		Categorical			
	Current Smoker	Quit Attempt	Assisted by Health Care Professional	Received Counseling	Used Cessation Medication	Confirmed Awareness
Overall	–	+	NA	NA	NA	NA
Age						
18 to 24	–			< 40 to 64	< all others	
25 to 39	–	+				
40 to 64	–	+				> all others
65+	–					
Race/Ethnicity						
White	–	+				
African American						> all others
Hispanic		+				
Education						
Less than high school		+				
High school graduate	–	+				
Some college	–	+				
College+	–	+	< all others			
Income						
Less than \$30,000		+				
\$30,000 to \$59,999	–					
\$60,000 to \$89,999	–	+				
\$90,000 or more	–		< less than \$30K, < \$60K to \$89K			
Mental Health (MH)						
Good MH	–	+		< poor MH	< poor MH	
Poor MH						

NA = not applicable.

+ Significant increase between 2000–2001 and 2008–2009.

– Significant decrease between 2000–2001 and 2008–2009.



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