

## Short Communication

# Examining the Link between Cigarette Experimentation and Continued Risk Practices among African American College Students

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**Abstract**

The purpose of the present study is to examine the link between cigarette experimentation and other risky behaviors in African American college students. Three hypotheses were proposed. The first hypothesis is individuals who have tried cigarettes are more likely to have tried marijuana. The second hypothesis is individuals who have tried cigarettes are more likely to initiate sexual contact at an earlier age and less likely to use a condom during their last sexual encounter. Lastly, it was hypothesized that individuals who have tried cigarettes were more likely to have tried other drugs. 411 African American college students between the ages of 18 and 57 participated in the study. Data was collected through a self-reported questionnaire. The findings revealed participants who had tried cigarettes were more likely to have tried marijuana. Smoking initiation was not significantly associated with condom use. The age of sexual initiation and first marijuana usage was lower in participants who had tried cigarettes. These findings indicate individuals who try cigarettes may be at a higher vulnerability for other risk practices.

**INTRODUCTION**

This short communication article will discuss current data while attempting to advocate for continued research and an in-depth analysis that takes into account culture, environmental/social issues, individual efficacy, and locus of control surrounding smoking practices among African Americans. African American college students have the lowest rates of cigarette smoking among all racial and ethnic groups. Individuals who consistently smoke cigarettes and cigars are clearly at a higher risk of developing cancer [1]. What else can performing these consistent risk practices tell us about college students? This brief communication article will attempt to explore the link between cigarette experimentation, substance use, and sexual risk practices among African American college students. It is important to acknowledge that social and cultural context must be taken into account when studying African American smoking practices [2].

Data from the Centers for Disease Control and Prevention [1] suggests African American college students who have tried cigarettes are more likely to have tried and quit than any other ethnic group. However, African Americans that continue to smoke

have higher mortality rates from smoking related illnesses in comparison to other racial and ethnic groups [3-5] and they are more likely to relapse.

Cultural factors (such as cultural identity, religiosity, etc.) may serve as moderators against substance use in African Americans. Nasim, Fernander, Townsend, Corona, and Belgrave [6] found traditional family practices, religiosity, and religious practices were buffers against substance use in African American adolescents. African American young women who had strong traditional religious beliefs were less likely to use tobacco products [5,7]. Substance use may also increase one's likelihood of engaging in other risky behaviors. During young adulthood, individuals are at an increased risk of contracting HIV/AIDS [8]. Anderson and Stein [9] found marijuana use was positively associated with engaging in risky sexual activities. Marijuana use prior to engaging in sexual activities reduced one's likelihood of condom usage [10]. Derese, Seme, and Misganaw [11] found alcohol use and tobacco use were associated with risky sexual practices in college students in Ethiopia.

Smoking has been linked to unhealthy behaviors such as

alcohol use, risky driving, depression, and a lack of physical exercise [12]. Alcohol use may increase one's cravings to smoke cigarettes [13]. In comparison to non-smokers, current smokers were 6.5 times more likely to use marijuana and five times more likely to binge drink.

The purpose of the present study is to examine the link between cigarette experimentation and other risky behaviors in African American college students. Although there are studies that have examined the link between smoking and drug initiation [14,15], this relationship has not been extensively studied in African American college students. Three hypotheses were proposed:

- 1) Individuals who have tried cigarettes are more likely to have tried marijuana;
- 2) Individuals who have tried cigarettes are more likely to initiate sexual contact at an earlier age and less likely to use a condom during their last sexual encounter; and
- 3) Individuals who have tried cigarettes are more likely to have tried other drugs.

## MATERIALS AND METHODS

### Participants

The participants for this study included 411 African American college students recruited from a historically Black university in the southeastern United States. The age of the participants ranged from 18 to 57 years old, with an average age of 20.67 (SD = 4.01). The sample consisted of 69.8% women ( $n = 287$ ) and 29.7% men ( $n = 122$ ).

### Procedures and Materials

For this study, the participants completed a pencil and paper survey which consisted of several measures to assess demographic information and health related behaviors. The health related behaviors examined in this study included cigarette, alcohol, and marijuana use as well as risky sexual behaviors. To measure these behaviors, the 143 item Youth Risk Behavior Survey (YRBS) was used. The YRBS was developed by the Centers for Disease Control and Prevention (CDC) and research has shown the YRBS to be a reliable and valid instrument [16,17]. For the YRBS, "youth" is considered up to the age of 24, which includes our college population, with an average age of 20.67.

## RESULTS

To examine the relationship between smoking initiation and risky health behaviors, a one-way MANOVA was used. The results of the MANOVA were statistically significant ( $F(8, 367) = 5.78$ ,  $p < .000$ ; Wilk's  $\Lambda = 0.890$ , partial  $\eta^2 = 0.110$ ). In terms of risky sexual behaviors, the age of sexual initiation ( $F(1, 382) = 24.37$ ,  $p < 0.000$ ; partial  $\eta^2 = 0.036$ ) was lower for participants who had tried cigarettes ( $m = 4.10$ ,  $SD = 1.31$ ) compared to those who had not tried cigarettes ( $m = 4.61$ ,  $SD = 1.30$ ). Participants who had tried cigarettes ( $m = 5.28$ ,  $SD = 2.35$ ) had more sexual partners than those who did not try cigarettes ( $m = 4.23$ ,  $SD = 2.25$ ). Smoking initiation was not significantly associated with condom use.

For drinking behaviors, ( $F(1, 382) = 4.09$ ,  $p < 0.002$ ; partial  $\eta^2 = 0.025$ ), participants who had tried cigarettes drank more often ( $m = 2.16$ ,  $SD = 0.62$ ) than participants who had never tried

cigarettes ( $m = 1.95$ ,  $SD = 0.67$ ). For age of drinking initiation, ( $F(1, 382) = 20.81$ ,  $p < .000$ ; partial  $\eta^2 = 0.052$ ), participants who had tried cigarettes had their first alcoholic drink at a younger age ( $m = 5.41$ ,  $SD = 1.48$ ) than those who had not tried cigarettes ( $m = 5.97$ ,  $SD = 0.92$ ). In terms of marijuana use, participants who had tried cigarettes were more likely to have tried marijuana ( $m = 1.17$ ,  $SD = 0.38$ ) than those who did not try cigarettes ( $m = 1.37$ ,  $SD = 0.48$ ). For the age of marijuana initiation, ( $F(1, 382) = 25.05$ ,  $p < 0.000$ ; partial  $\eta^2 = 0.062$ ) those that had tried cigarettes were younger when they first tried marijuana ( $m = 4.65$ ,  $SD = 1.29$ ) compared to participants who had not tried cigarettes ( $m = 5.35$ ,  $SD = 1.39$ ). Smoking initiation was not significantly associated with the frequency of marijuana use or the use of other drugs including cocaine, prescription drugs, or inhalants.

## DISCUSSION

Self-regulation has often been linked to an individual's ability to cognitively weigh the costs and benefits surrounding different opportunities and issues [18]. When youth aged 17-24 are not required to regulate or abstain from one risk, they may be more likely to engage in others. Boyd, Perkins, Greenberg, and Stevens [19] suggest that parental communication surrounding substance abuse is minimal with the main outcome being parents telling their children simply "to not do drugs" without providing any additional discussion or information. It stands to reason that the first drugs a lot of young adults try are cigarettes and other substances. Hall and Fong [18] proposed the temporal self-regulation theory (TST) to understand health behaviors such as smoking cessation. For some individuals, the benefits of smoking include social acceptance, relaxation, and a coping mechanism for stress [5].

Research has suggested that early smoking initiation may be linked to problems regarding substance use in college such as binge drinking and other drugs [20]. This research suggests that individuals who try cigarettes may be at a higher vulnerability for other risk practices. In this study, individuals who tried cigarettes had sex earlier, were younger when they had their first alcoholic drink, and were younger at their age of marijuana initiation. This data supports Nasim, Fernander, Townsend, Corona, and Belgrave's [6] work on the need to address smoking in middle and high school. In addition, these patterns may assist with the development of early intervention programs for college students. Strategies should include social and culturally relevant materials that address research on smoking and risk practices among African American freshmen college student smokers. Questions generated by this research include:

1. Since experimentation does not always lead to continued usage, is there a way to reach these individuals before the continuation of usage or before trying and liking other drugs?
2. Cigarette experimentation has been associated with the initiation of sex and alcohol use, but further exploration may focus on cigarette trial and age of initiation, order of risk practices, and continued usage.
3. Since this data did not allow one to examine the directionality of cigarette experimentation, sexual initiation, and other drugs, it may be important to examine the order of these risk practices among African American college students.

## CONCLUSION

Currently, strategies exist to reduce underage drinking on college [21,22]. These strategies and interventions should incorporate a smoking prevention intervention to assist students with a known risk factor. This study conducted with African American college students found that participants who had experimented with cigarettes had more sexual partners, drank more, and used marijuana more than their counterparts. Early smokers may be masking anxiety, depression, and/or other issues that they believe is moderated or reduced by the use of substances such as cigarettes and marijuana [23,24]. Thus, a strong intervention would assist with providing a system of balance as the individual refrains from smoking. Essentially, the limitations of this study were the sample population and the use of cross sectional data. The current study was conducted with all African American college students. Further research should include a larger diverse population to determine if the findings can be generalized to various populations. Having a larger diverse sample size can assist with examining differences and similarities between groups (e.g. ages, ethnicities, classifications, geographical differences, etc.) and provide a holistic approach to this area of research. The goal is to reduce smoking as well as using alcohol and other substances [25]. Developing a smoking prevention intervention for college students who smoke may reduce the co-occurrence of sexual risk behaviors and substance use into adulthood.

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