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VCU

# Smoking patterns among VCU students

Jasmine Saini; Amy Adkins, PhD; Danielle Dick, PhD

## Abstract

For some individuals, college can be a high risk time for the development of problems associated with alcohol use and other substances. The purpose of this study is to examine these initiation and use patterns as they relate to nicotine use among college students 18 years of age and older enrolled in Spit for Science: The VCU Student Survey. The Spit for Science research project evaluates how genetic and environmental factors contribute to substance use and emotional health among college students at VCU. This study uses data from the Spit for Science 2011 cohort (n=2007) to investigate smoking patterns among males and female and how they change over the course of their college careers. Starting with a baseline cigarette use (lifetime) question in their freshman fall survey, we will compare this to participants' sophomore spring and junior spring surveys to assess smoking initiation rates and smoking patterns during college. Initial analyses show that 63% of participants had never had a cigarette by the time of their entry to VCU. This research will shed light on initiation and use patterns at VCU and lay the groundwork for future studies involving prevention and intervention programming.

## Introduction

Regardless of widely available scientific knowledge regarding the harmful effects of tobacco consumption and health benefits of quitting at younger ages, statistics show that 1 in 3 of all adults under the age of 26 continue to smoke (Bize, 2007). Studies have demonstrated that both genes and the environment are important to understand the etiology of behaviors having to do with smoking initiation, nicotine dependence, and many other smoking behaviors (Sullivan, 1999). In order to further understand smoking behaviors and continue efforts to inform young adults about the ramifications of cigarette smoking, this study attempts to shed light on the reality of college smoking habits at VCU. Specifically, the study is designed to answer these questions:

Research questions:

**Do students that enter VCU never having tried a cigarette remain smoke-free through their college careers?**

**\*Do smoking rates differ between males and females at VCU?**

Hypotheses:

Students who initiate smoking begin early in their college careers, as they are in a potentially more adventurous environment. After the freshman year, smoking initiation rates level off. Women smoke less than men, perhaps because of gender roles and cultural "norms."

## Methods

Spit for Science:

Spit for Science is a VCU-wide, longitudinal research study that collects data from students 18 years old+ from their entrance into college into their final year. This is done through online surveys that examine environmental influences, as well as a DNA spit sample, which allows researchers to examine genetic variants that may contribute to specific life outcomes.

This study uses the Spit for Science 2011 cohort .

- N=553 students
- Survey data from fall of freshman year and each spring through junior year
- To assess lifetime smoking, the survey asked 'How many cigarettes have you smoked in your lifetime?', and the choices were 'None', 1 – 9, 10 - 99, 100 – 200, More than 200, and 'I choose not to answer'.
- Variables recoded to 'None', '1-99 cigarettes', and 'over 100 cigarettes' as well as to 'never' or 'ever'.
- Participants with missing data for any of the surveys were not used in this study.
- SPSS was used to analyze the data.

## Figures

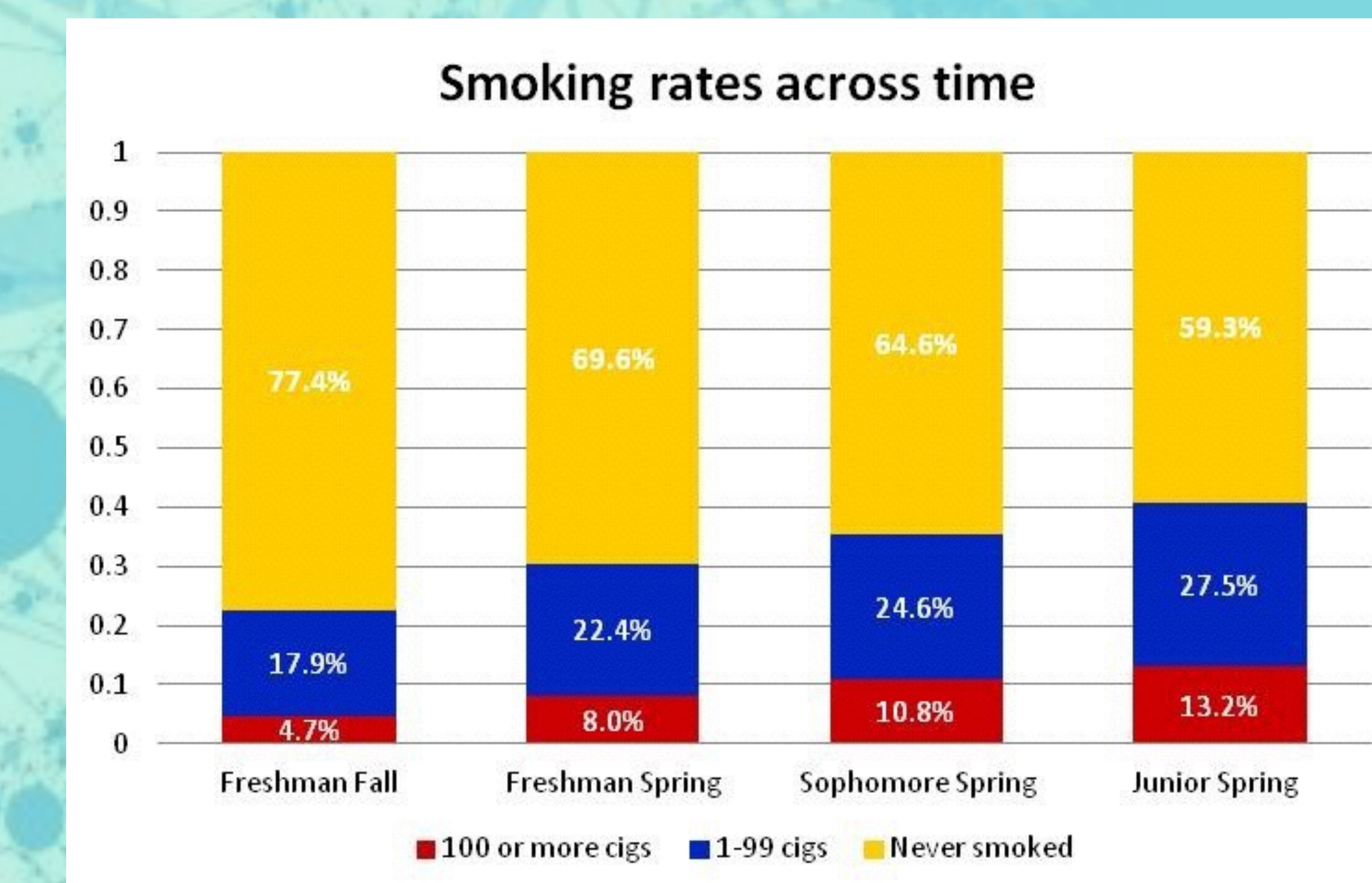
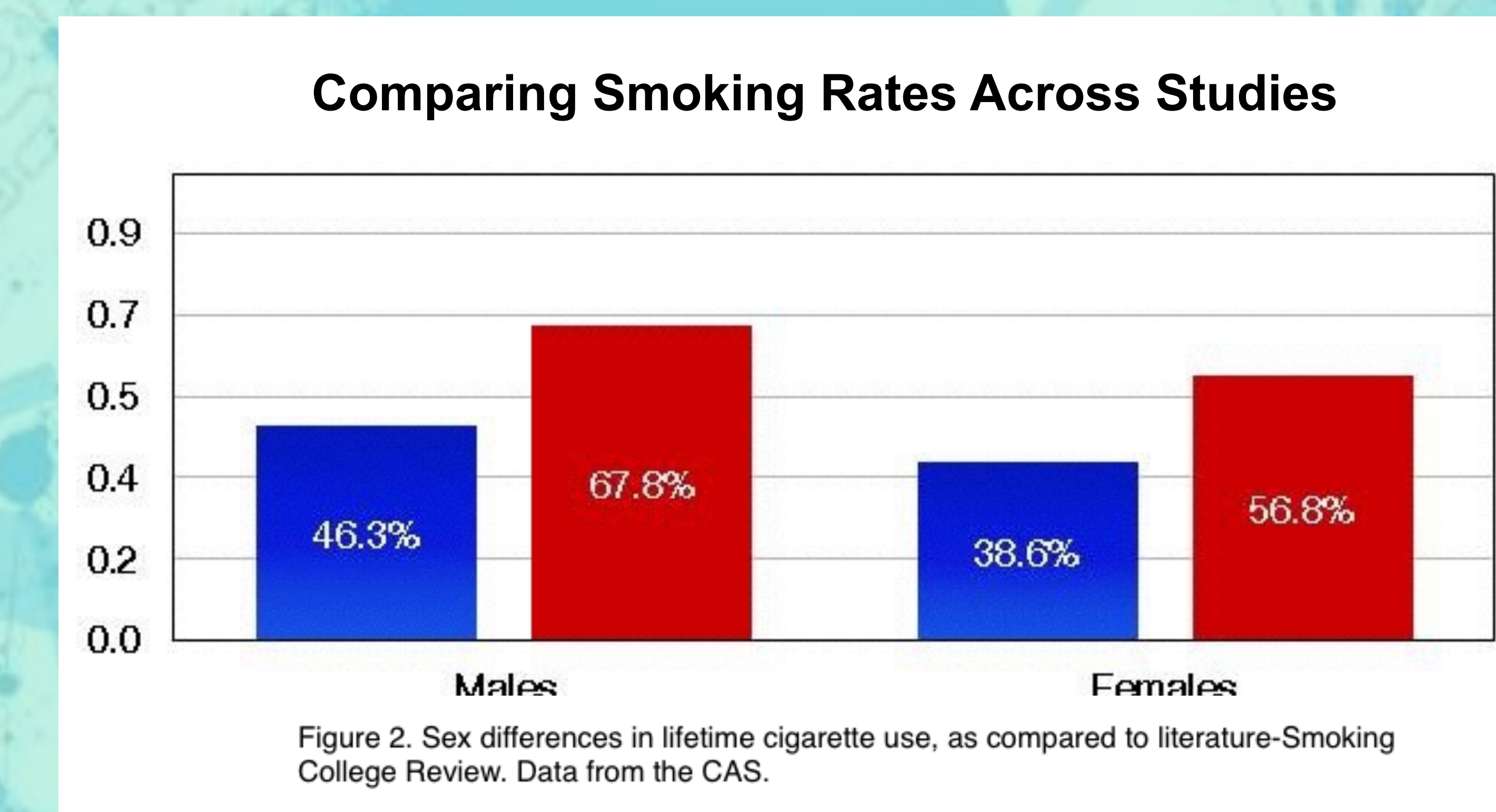
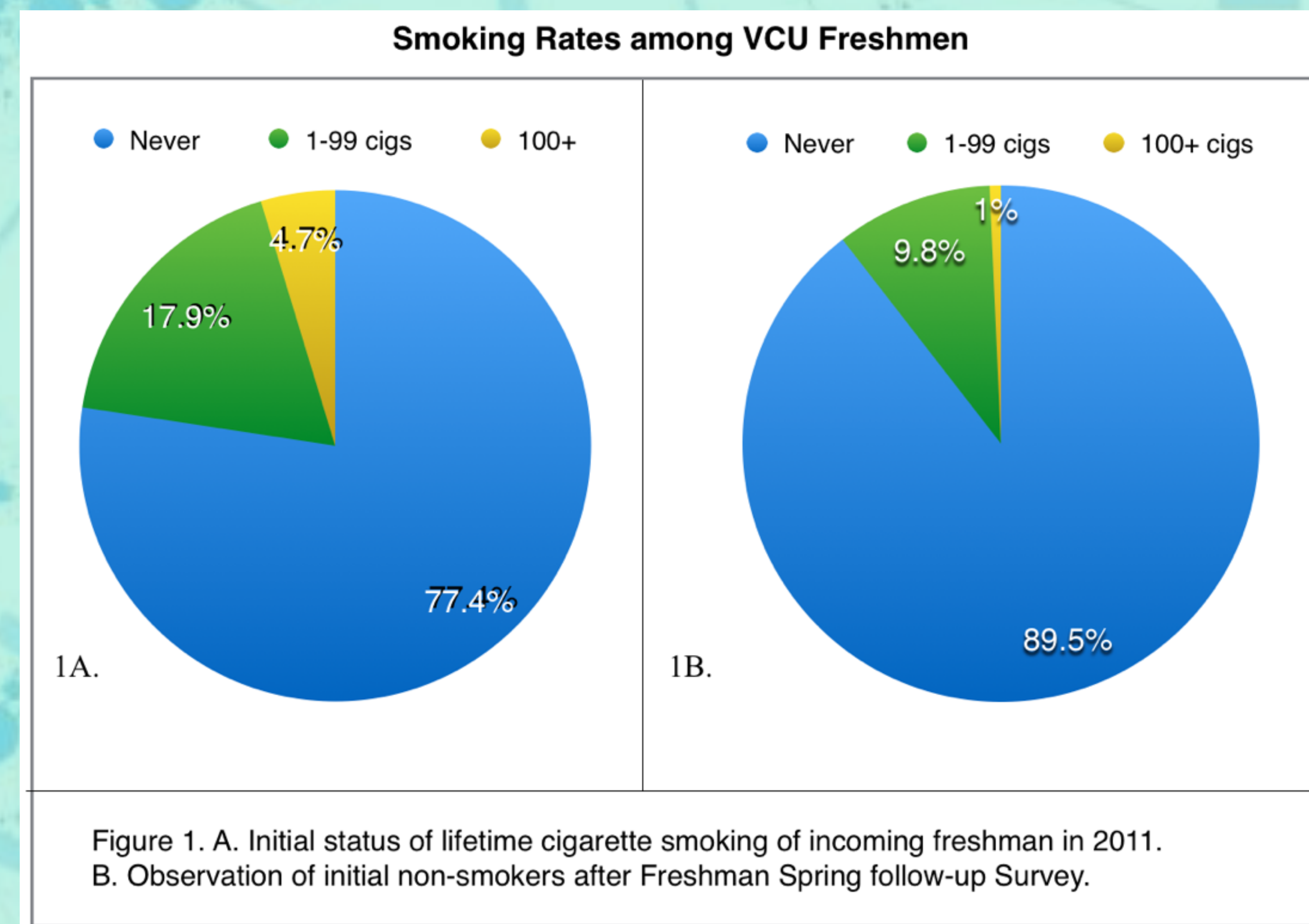


Figure 3. Overview of smoking rates of all VCU participants over time of 2011 Cohort.

## Results/Discussion

\*4.7% of students had smoked more than 100 cigarettes, 17.9% of students had smoked between 1 and 99 cigarettes, and 77.4% of students had never tried a cigarette upon entering college.

\*Of this non-smoking population, 89.5% remained smoke-free through the second semester of their freshman year (See Fig. 1). This means that 10.5% students initiated smoking cigarettes during this time. This represents the largest initiation jump in our data from one survey period to the next.

\*Smoking initiation rates drop as students reach their second and third years on campus. Of the 2011 Cohort, 76.2% of non-smoking individuals remained smoke-free through their Junior follow-up survey in Spring 2014.

\*Results of cigarette smoking use differences, in the junior year, between sexes show that females smoke slightly less (38.6%) than males (46.3%), but this differences is insignificant ( $p=0.092$ ). (See Fig. 2).

## Conclusion

Although it may seem like everyone is smoking, in reality about 3 out of 4 VCU students never initiate smoking cigarettes during college. The purpose of this study was to shed light on college smoking initiation patterns to inform both students and researchers of when a student is most likely to engage in such behaviors. During the first year of college, students are newly independent and may be more likely to engage in activities that are risky or thrill-seeking. Results show that this may be true also for cigarette smoking initiation. Data from later surveys also imply that students who still don't smoke after the freshman year window are more likely to stick to their decision to stay smoke-free. Further research may be required to understand why this might be. Previous data reports that smoking differences among males and females are very similar, but studies show that females smoke slightly less than males, though the differences are not statistically significant. Different societal pressures may account for the slight contrast between smoking patterns in the sexes. This research shed light on initiation and use patterns at VCU, and lays the groundwork for future studies involving prevention and intervention programming. Future studies could include a larger sample size, use of tobacco not limited to cigarettes, and a different university population.

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