

Smoking Behavior and Compliance with Smoking Signs among Students

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### Abstract

This research presentation explores compliance of students smoking on CUNY Hunter College through an observational study. Smoking has been harmful to the human race since as we first heard it from the Surgeon General, Dr. Luther Terry, in the year 1964 (U.S Department of Health and Human Services, 2016), yet after rules have been placed to prevent smoking, people are still not complying as wished. Hunter College, along with many other colleges, has a 'No-Smoking' section to prevent smoking and yet there are still people who are ignoring these laws. For this observational study, participants were a convenience sample of Hunter College students. No identities were collected to keep this study anonymous. For this research, observations were made on two locations on Hunter College campus which can be seen on Image 1. Two locations were added so that a comparison to incidence of smoking away from the signs can be made. There were 15 (71.4%) people smoking in sign-designated non-smoking area, and 6 (28.6%) in unsigned areas. Many more smokers smoked in sign-designated non-smoking areas than in unmarked areas,  $\chi^2(1, N=21) = 3.86, p = .0485$ . The results of this experiment supported my hypothesis that most smokers are in the signed non-smoking areas. As we can see from the results, there are significantly more smokers in areas of the Hunter College campus where the 'No-Smoking' signs are much more obvious than in the areas where the 'No-Smoking' signs are less noticeable. In the process of this, more ideas were made for directions of future research .

*Keywords:* Smoking, compliance, health care, diseases, students

### Smoking Behavior and Compliance with Smoking Signs among Students

Smoking causes more than 480,000 deaths annually (including deaths from secondhand smoke) (CDC.gov) and yet after rules have been placed to prevent smoking, people are still not complying as wished. Hunter College, along with many other colleges has a 'No-Smoking' section to prevent smoking and again yet there are people that are not complying. There are no previous Hunter College smoking compliance studies that were found to make any study comparisons although there are studies in other places that observed people that smoked in prohibited areas as well (Navas-Acien et al., 2016). The purpose of this research is to see the percentage of people that are still smoking in areas where 'No-Smoking' signs (Image 2) are obviously posted and compare them with smokers that smoke on areas that does not have obvious 'No-Smoking' signs on Hunter College campus with the types of enforcements that are already implanted. Attempts have been made to not offend anyone especially smokers, campus security enforcers, graphic designers, and property managers. From this study, information can be collected to make better interventions, prevent diseases, and improve health care. There have been other observational studies on smokers as well such as the Tao, Wang, Gao, and Yuan (2013) study, which states that smoking is harmful anyway done, no matter the location, and that we still can learn more from studying smokers (Tao, Wang, Gao, & Yuan, 2013). There are some hidden smokers on the campus causing second hand smoke so some people who do not smoke may not know they are inhaling pollution. It is good to know the health risks of locations; some consider location important because it may be a vital sign question when checking people's health (Paskett, 2016). The expectation is to find that there are more students that smoke in the area where 'No-Smoking' signs are obviously present than areas where signs are not as visibly present.

## Method

### Participants

For this observational study, participants were a convenience sample of Hunter College students. The participants were simply observed and did not need to disclose their identity nor any specific accurate demographic information. This was more of an anonymous study so no consent form was needed from any of the observed participants. From the observations, it seems as if the participants were between the ages 18 and 40, this is just an approximation since this was an anonymous study.

### Procedure

For this research, observations were made on two locations on Hunter College campus which can be seen on Image 1. Two locations was added so that a comparison to incidence of smoking away from the signs can be made. The location where 'No-Smoking' signs were obviously present is coded as Area 2. The other area, coded as Area 3 is where 'No-Smoking' signs are less visible. In between the two areas is where the monitoring of the smoking students took place. A time table to keep count of the students was used for inspecting the smokers – once every 15 minutes during a couple of hours in the morning and afternoon. The time interval was added because it can assure that one participant is not counted twice smoking the same cigarette since from my experience, it is typical for a cigarette to not last more than 15 minutes.

## Results

There were 15 (71.4%) people smoking in sign-designated non-smoking area, and 6 (28.6%) in unsigned areas. Significantly more smokers smoked in sign-designated non-smoking areas than in unmarked areas,  $\chi^2(1, N=21) = 3.86, p = .0485$ .

## Discussion

The results of this experiment supported my hypothesis that most smokers are in the signed non-smoking areas. As we can see from the results, there are significantly more smokers in areas of the Hunter College campus where the 'No-Smoking' signs are much more obvious than in the areas where the 'No-Smoking' signs are less noticeable. Again, the entire Hunter College campus along with every other CUNY school is a 'No-Smoking' area but as the results show, there are still smokers smoking even though the General Surgeon of 1964, Dr. Luther Terry, announced it to be harmful many years ago. After the observation study was completed, a quick question of “why do you smoke here?” were asked to one of the smokers of both areas and two responses received were “it is close by the entrance” or “security says 'it's ok here.” The random questions after the observational study was completed were asked to the participants that were not included in the data collection. The possible reasons that there are more smokers in the area where the 'No-Smoking' signs are more obviously posted compared to the area where there are less visible signs posted are the following: they seem to have more places to sit/lean, they are more shaded areas, they are closer to the entrances or exits, they are closer to the trains or buses, and/or people simply do not care where to smoke so they picked the area by random.

Some errors or weaknesses may have occurred during this study. A possible threat of an event, also known as threat of history. Another possible error or weakness could be that the smokers may not have been actual students and just passersby who may have thought it is more comfortable to smoke on these locations.

In conclusion, the results show that compliance of smoking students is not as well as it could be. Smokers are smoking right next to numerous 'No-Smoking' signs, as bad as it is for their physical health and body organs, it also may make them look like they are careless of the basic rules of society. As the results from this study show that there are significantly more

smokers smoking in the area where there are more 'No-Smoking' signs posted. This may lead to further studies such as long term observations on smoking, studies based on ways to improve No-Smoking policies, security involvement, human rights on smoking, second hand smoke harmful effects, cancer, pneumonia, deaths caused by preventable diseases, and/or other studies that can help make better health care.

## References

CDC.gov. (2016). *Smoking and Tobacco Use*. Retrieved from CDC.gov:

[http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/health\\_effects/tobacco\\_related\\_mortality/index.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/index.htm)

Goodwin, C. J., & Goodwin, K. A. (2003). *Research in Psychology: Methods and Designs*.  
Danvers, MA.: Wiley.

Hunter.cuny.edu. (2016). *Hunter Visitors Center*. Retrieved from Hunter.cuny.edu:

<http://www.hunter.cuny.edu/visitorscenter/68th-street-campus-map>

Hunter.cuny.edu. (2016). *Tobacco-Free Hunter*. Retrieved from Hunter.cuny.edu:

<http://www.hunter.cuny.edu/tobaccofreehunter>

Navas-Acien, A., Carkoglu, A., Ergor, G., Hayran, M., Erguder, T., Kaplan, B.,... Cohen, J. E.

(2016). Compliance with smoke-free legislation within public buildings: a cross-sectional study in Turkey. *Bulletin of the World Health Organization*. Vol. 94., No. 2. 91-102.

Retrieved from: doi: <http://dx.doi.org/10.2471/BLT.15.158238>

Paskett, E. D. (2016). The New Vital Sign: Where Do You Live? *Cancer Epidemiology, Biomarkers & Prevention*, Vol. 1, No. 4. 581-582. Retrieved from:

<https://rap.northshorelij.com/content/25/4/DanaInfo=cebp.aacrjournals.org+581>

Tao, L., Wang, R., Gao, Y.-T., & Yuan, J.-M. (2009). Impact of Post diagnosis Smoking on Long-term Survival of Cancer Patients: *The Shanghai Cohort Study*. *American Association for Cancer Research*, Vol. 22., 2404–11. Retrieved from:

<http://cebp.aacrjournals.org/content/22/12/2404.full.pdf+html>

U.S Department of Health and Human Services. (2016). *Tobacco*. SurgeonGeneral.gov.

Retrieved from: <http://www.surgeongeneral.gov/priorities/tobacco/>



Image 1: Map of Hunter College CUNY (Hunter.cuny.edu., 2016).



Image 2: Photo of a 'No-Smoking' sign. These are placed randomly throughout the premises. (Photographed by Daniel Olivo, 68<sup>th</sup> street on Lexington Ave, New York, NY 10065,USA, 2016.)

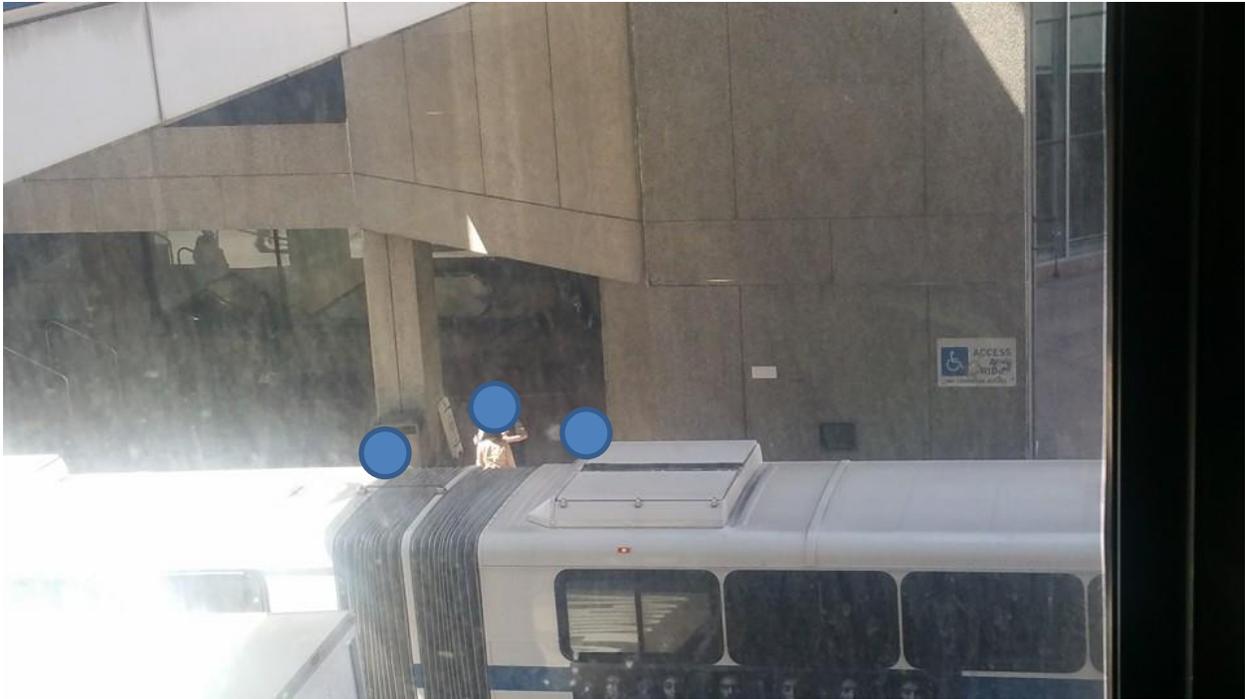


Image 3: Area 2, smokers right next the 'No-Smoking' sign.

(Photographed by Daniel Olivo, 68<sup>th</sup> street on Lexington Ave, New York, NY 10065, USA, May 2016.)



Image 4: Area 2, Some smokers sitting down or leaning against a wall.

(Photographed by Daniel Olivo, 68<sup>th</sup> street on Lexington Ave, New York, NY 10065, USA, May 2016.)

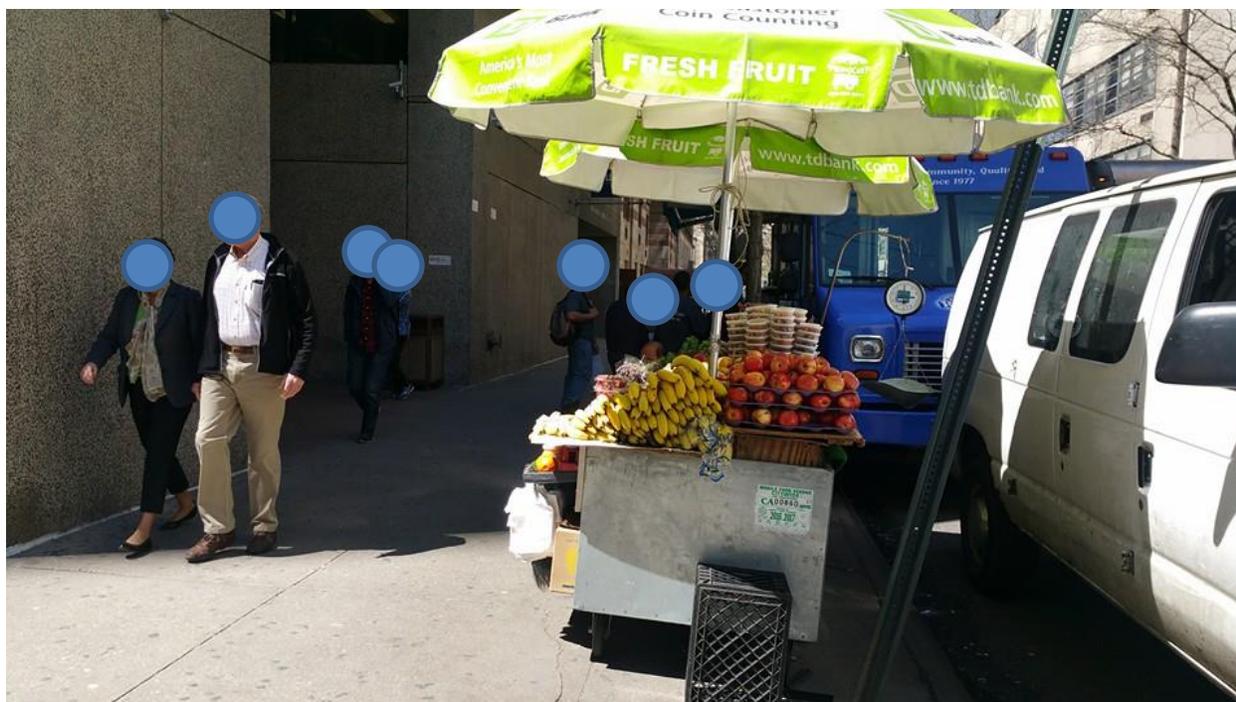


Image 5: Area 4, shaded areas where some smokers lean against the wall.

(Photographed by Daniel Olivo, 68<sup>th</sup> street on Lexington Ave, New York, NY 10065, USA, May 2016.)