



Investigating Smoking on a University Campus

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Introduction

- Strong evidence suggests secondhand smoke may cause cardiovascular disease, lung cancer, respiratory disease, and premature death (Barnoya & Navas-Acien, 2013).
- Policies designed to regulate smoking within public buildings increased the likelihood that smoking will occur in outdoor areas, especially in the vicinity of public buildings. Few studies have specifically researched the effectiveness of these smoking policies on college campuses (Harris, Stearns, Kovach, & Harrar, 2009).
- Research suggests that decreasing the amount of effort required for responding in a particular way can increase rates of desirable behavior such as paper recycling and cigarette filter disposal (Brothers, Krantz, & McClannahan, 1994; Friman, 1995, Friman and Poling, 1995).
- Researchers found that 94% of participants claimed it was “everyone’s responsibility to clean up litter,” but only 1.4% of participants picked up litter 10 feet away from them at the time of their interview (Bickman, 1972). This study is consistent with studies suggesting self-report data may be less accurate than other methods of data collection such as direct observation. (Miller, 2006).
- The goal of the current study was to utilize direct observation to obtain information on the frequency with which smoking occurs in areas designated by the university as smoking and non-smoking areas, and to investigate variables that may be associated with smoking frequency, such as time, temperature, and location.

Method

Participants and Setting

All students, faculty, staff, and community members who visited the campus, were considered to be potential participants. Approximately 11,000 undergraduate and graduate students attend the university. Student demographics are 58.4% female, 41.6% male (College, US News). The University of Wisconsin – Eau Claire also employs 796 individuals as academic faculty and staff (UWEC, 2014). An individual was considered to be a participant in our study if they entered a designated observation area with a lit tobacco product. Researchers did not record any personal information or characteristics of participants. Observations took place from a distance which allowed participants to be observed. There was no interaction between observers and participants. Sets of researchers collected data simultaneously at designated smoking and non-smoking areas corresponding to the academic building.

Locations

Human Sciences and Services:

Smoking: The loading dock at the southwest corner of the building
Non-smoking: The back entrance located at the southeast corner of the building

Towers Hall:

Smoking: Designated smoking area near Garfield Avenue
Non-smoking: The southwest entrance at the corner of the building

Library:

Smoking: Designated smoking area near Garfield Avenue entrance
Non-smoking: The eastern entrance to McIntyre Library

Schneider/Phillips:

Smoking: The designated area to the east of Phillips Science Hall
Non-smoking: The western entrance to Schneider Social Science Hall

Centennial:

Smoking: The designated area between Centennial and Zorn Arena
Non-smoking: The area under the awning between Centennial and Schneider

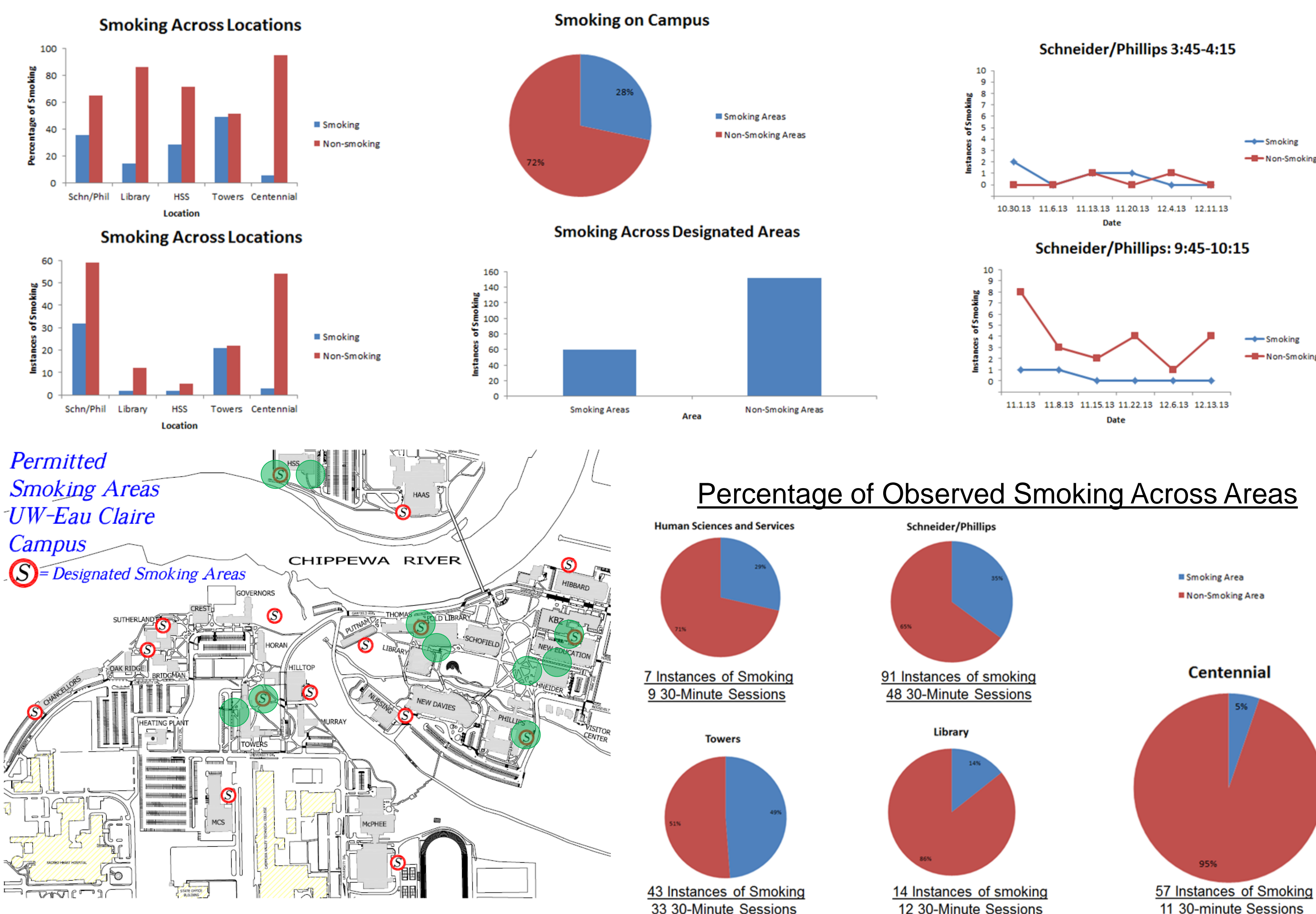
Procedure

Researchers recorded instances of smoking within designated smoking and non-smoking areas. Sets of researchers observed simultaneously at the designated smoking and non-smoking area of a specific location during 30-minute observation sessions. During observation sessions, researchers recorded instances of smoking in the designated area in addition to several other variables including time of day, temperature, and weather conditions. Researchers did not record any personal information or characteristics of smokers. An instance of smoking was defined as an individual with a lit tobacco product within the observation area. This definition included any individual who left or entered the observation area with a lit tobacco product. In the event that an individual consumed more than one tobacco product within the observed area, observers recorded multiple instances of smoking.

Interobserver Agreement

Interobserver agreement (IOA) across all locations was 93%. IOA was collected on 43% of observation sessions, during which two observers collected data simultaneously at one of the designated areas. IOA was calculated by dividing the total number of agreements by the total number of agreements plus disagreements and multiplying the total by 100.

Figures



Results & Discussion

Results

- Results indicate that, during observation hours, 72% of observed smoking occurred in areas in which the current policy prohibits smoking.
- Observed instances of smoking differed across locations, with higher rates observed at several academic buildings relative to others.
- Observed instances of smoking differed across locations for both smoking and non-smoking areas .
- Instances of smoking differed across time of day as is evident in the two Schneider/Phillips graphs above.
- Temperature was found to be positively correlated with instances of smoking.

Discussion

- Smoking occurred in non-smoking areas more frequently than in smoking areas, this suggests that these areas are more appealing (less effortful, closer in proximity to classes/popular spots, more comfortable).
- If the university were to enforce the policy, results from the current study may be useful in making data based decisions at the university level in order to allocate resources efficiently.
- Towers hall had the most similar frequency of smoking in smoking and non-smoking areas. Towers hall is also the only smoking area which offered overhead shelter and seating. Future researchers could investigate whether making smoking areas more appealing might shift the proportion of smoking in designated smoking areas.
- Most of the smoking that occurred at Centennial hall was under the awning on the south side of the building between centennial and Schneider. This location may fit the criteria of a designated smoking area: away from heavily trafficked areas, building entrances, and air intakes.
- The university may choose to utilize results from the current study to implement empirically driven policy that may serve as a model for other institutions.
- Through the use of direct observation of smoking on campus, researchers were able to assess the frequency of smoking on campus as it actually occurred, producing more accurate results than can be expected from self reported data.

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Support for this project was provided by the UWEC Office of Research and Sponsored Programs. Special thanks to Data Collectors: Hayden Anderson, Meghan Bublitz, Lindsey Ellenberger, Cora Fox, Samantha Klasek, Eric Seeds, Lauren Speckin, and Leah Verkuylen.