

# Comparing Driving Under the Influence (DUI) Arrests of a College Town to a Non-College Town



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## Abstract

The purpose of this study was to compare DUI arrests of a college town to a non college town. The neighboring towns of Carbondale (a college town) and Marion (a non college town) were compared in this study because of their similar population size and similar location within the state of Illinois. We gathered data from each respective police department along with the Southern Illinois University in Carbondale (SIUC) campus police. Analysis using Geographic Information Systems (GIS) software and Microsoft Excel revealed that having a college in a town greatly influences DUI arrests.

## Introduction

Much research has been done dealing with the social life of college students. Some people hold the perception that many college students do nothing other than party and drink through their four years of education. It is well noted that SIUC has a long reputation for being a party school. A comparative study about DUI arrests between a college town and non college town will show whether or not student drinking and driving behaviors differ from the rest of the population. Similar to the social spectrum in life, it is not fair to prejudice a college community about its alcohol arrests based solely on the fact it has a university within its town limits. A problem in society in the United States is that many of us tend to stereotype certain groups. College students have been perceived as big drinkers for a long time and now its time to see if the numbers add up.

## Data and Methods

We collected the DUI arrest data from Carbondale and Marion police departments, as well as the SIUC campus police. For Carbondale, we were able to acquire the following attributes for each arrest: date, location, and age. From the Marion police department and SIUC campus police we were able to gather DUI arrest data that contained dates of the arrest and age (Campus police stated "student" or "other"), but not the location.

After we received the data, we used a variety of techniques to analyze it. Excel-generated graphs were produced for the Carbondale, Marion, and the campus police data sets for 2004, 2005 and 2006. Since the data had been created in Microsoft Excel, it was possible to use the data in ArcMap as a database format file. This allowed for more extensive analysis using some mapping techniques. Each year of Carbondale was input into ArcMap, since it was the only data set that was acquired with location as an attribute. Geocoding the addresses proved more difficult than expected because of the vagueness of some addresses reported in the arrest and the differing street names between the arrest records and the street map. Overall, we feel we got a good representation of where DUI arrests most commonly occur, even with those limitations. After the addresses had been geocoded, a density map was also produced in ArcMap. The density map provides a good visual of the changes in DUI arrests between the study years.

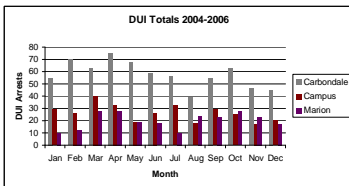


Figure 1: Monthly DUI totals from each data set

## Results and Discussion

As one may predict, many arrests occurred on Route 51 and Highway 13 within Carbondale. The density maps show the differences between years, most notably in 2005. The other two years, 2004 and 2006, seem to be more dispersed than the very high concentration in the middle of Carbondale for 2005. Also, it is interesting that many of the residential areas have little or no DUI arrests at all. There were hardly any arrests on the southwestern portion of Carbondale, where very few students reside.

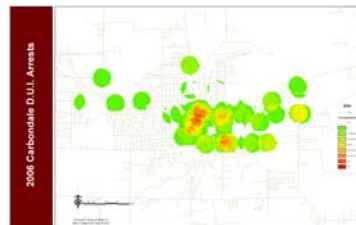
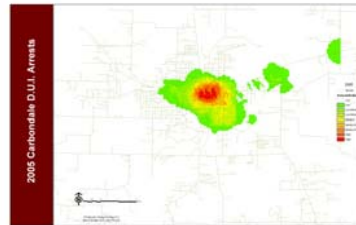


Figure 2: Carbondale DUI density maps

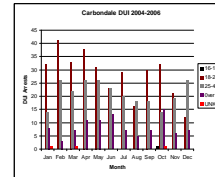


Figure 3: Carbondale DUI Arrests

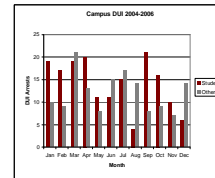


Figure 4: SIUC Campus DUI Arrests

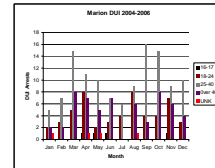


Figure 5: Marion DUI Arrests

## Results and Discussion, cont.

The DUI data from the years 2004-2006 was gathered from both the City of Carbondale and the city of Marion. The city of Marion police department was the only law enforcement in the city with the power to arrest DUI offenders. Carbondale on the other hand had a city police department as well as the campus police department with the power to arrest DUI offenders. The data from all three police stations added up to 1,247 different DUI offenses. The data from both Carbondale police department and the campus police department indicated that DUI arrests during the summer semester were slightly down. There was also a slight drop off in the month of December. Carbondale records also indicated that DUI offenders were ages 18-24 in most months except for June, August and December. Similar to that the Campus police data showed that in most months except for June, July, August, December and March by just a small amount that DUI offenders were students. An interesting result showed that the campus police department alone had more DUI arrests than the whole city of Marion.

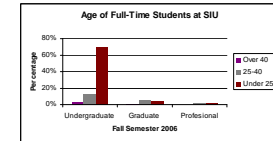


Figure 6: Students Age at SIU

## Conclusions

In conclusion it is apparent from the results that Carbondale, which is slightly larger than Marion, is influenced by its college student population at least when referring to DUI arrests. The results showed that DUI arrests were down during June, July, August and December all months when most college students are typically home on break. The average age of an undergraduate student has been 23.7 in the past three years according to the Institutional Research and Statistics (IRS) at SIU and since 70% of all undergraduate students in SIU are ages 18-24 it's no wonder why we see that in most months except for June, August and December DUI offenders were ages 18-24. Carbondale's DUI arrest totals from the years 2004-2006 was 1,008 while Marion's DUI arrest totals was only 239. Having an additional police force and having a slightly larger population certainly contributed to the difference, but the main reason Carbondale had four times as many DUI arrests than Marion was simply because the college student population did in fact influence the towns DUI arrest totals.

## Acknowledgements

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