

Riding the Risk: Understanding College Campus Bicycle Theft with a Mixed-Methods Approach

PROJECT DESCRIPTION

Project Overview

The purpose of this project is to study bicycle theft on college campuses in the midwestern United States. Specifically, the study will focus on identifying key ecological risk factors that drive theft in campus settings utilizing a mixed methods approach. The mixed methods approach will allow for focus not only on the quantitative data, but also allow for probing into the victims of bicycle theft, asking about their experience with the issue. This will give a comprehensive view not only into who is most at risk of bicycle theft, but also of the associated risk factors and the police response to the thefts. In summary, the goals of this GRACA application will be to assist in: (1) attaining quantitative data regarding bicycle theft, (2) fielding questionnaires to draw in interviewees who have been victimized by bicycle theft, (3) coding interviews for qualitative data, and (4) completing a research study and readying it for publication and presentation at research conferences.

Background

Bicycle theft is a unique yet understudied type of crime that affects individuals everywhere. In many cities across the world, bicycles are common among everyday commuters and are used to go everywhere. Some estimates show that there are, at the very least, hundreds of thousands of bicycles ridden every day in the United States alone (Belov, 2021; *NYC DOT - Bicyclists - Cycling in the City*, 2022). However, one thing that plagues riders everywhere is theft. Bicycle theft stands out among other types of theft as it is the theft of a personal vehicle, yet still goes underreported and understudied. The 2019 statistics on bicycle theft from the FBI (*Table 7*, 2019) put it at just under a quarter million bikes stolen every year. This figure pales in comparison to other estimates (Johnson et al., 2008) that put the number into the millions. Johnson and their colleagues also highlight the great under reporting issue of bicycle theft, reflected in a study by Dai & Gao (2021). Bicycle theft remains a common trait in developed countries, even those with the highest rider ship, despite advances in modern technology and policing that could lessen these numbers (Van Lierop et al., 2015; Zhang et al., 2007). This results from the sheer lack of attention devoted to bicycle theft as bicycles are often easy to steal, easy to hide, and easy to sell off. This all gives enough reason to study bicycle theft in America, but the importance of this study will really lie in bringing focus to college campuses in the Midwest.

This project originates after my own bicycle was stolen from my dormitory upon the day of arrival at UNO. I decided, as a student in criminology, I will take it upon myself to study this phenomenon and niche of crime as a class project. With the help and guidance of Dr. Ling Ren (SCCJ), this project quickly evolved into a study that has the potential to produce one-of-a-kind results. After analyzing prior literature on bike theft, I have identified significant correlations between areas with high population density, more bike racks, and more disadvantaged people and increases in bike theft (Chen et al., 2018; Salvanelli, 2019). These qualities all similarly reflect for college campuses where biking is a common or promoted activity and students often are financially disempowered. According to the study by Dai & Gao, (2021), college students, a generally younger population, will also be less likely to report bike theft. This is more reason to investigate further this phenomenon happening on college campuses. Importantly, prior literature also suggests that bicycle theft generally drives down ridership, disadvantaging further those who do and don't ride (Cohen et al., 2024; Lu et al., 2020; Márquez & Soto, 2021). In preliminary analysis looking into bicycle thefts in Omaha and on all college campuses within Omaha (UNO/UNMC, Creighton, College of Saint Mary, and Metro CC), it was decided to diversify the data to all University of Nebraska campuses. We have already collected quantitative data from UNO/UNMC, the Lincoln and

Kearney campuses will follow suit. This study has the potential to have high impact and the first to analyze a diverse array of college campuses ranging from urban (UNO/UNMC) to college town (Lincoln) to small/rural city (Kearney).

Methodology

The process undertaken for this project will require collecting quantitative and qualitative data regarding bicycle theft from all University of Nebraska campuses (Omaha, Lincoln, Kearney, and UNMC) and the analysis of this data in relation to various theories of criminal offending. The analysis of the quantitative data will allow an unparalleled insight into the ecological factors contributing to bicycle theft. Currently, data collected from UNO and UNMC offer date, time, location, and circumstances of theft. These characteristics of the data already make for great geospatial, temporal, and longitudinal analysis. Ideally, similar data will be collected from all campus locations. Similar to a study in D.C. (Levy et al., 2018), multiple theoretical implications will be tested for in the college campus environment. The quantitative analysis will be done in conjunction with qualitative analysis via conducting interviews with victims of bicycle theft. Interviewees will be culled by fielding via email, social media, and physically a flyer with an attached questionnaire drawing the attention of anyone whose bicycle has been stolen. The flyer will have a brief explanation of this project and a QR code linked to a fill out form for anyone willing to be interviewed about their victimization experience. An incentive to complete the interview, such as an Amazon gift card, will be offered. The process will take place over Zoom in one-on-one sessions.

Using a semi-structured questionnaire, I will ask questions regarding the circumstances of their theft, the associated costs, if their case was ever closed, if they reported the crime, and, if so, what their experience with law enforcement was. This research will be crucial in understanding how sentiments toward law enforcement are informed. Information such as living conditions (on or off campus), full/part time student status, and/or faculty or staff positions will be supplemental information from the interviews and the study's data collection.

To reiterate, the goals of this study and how GRACA funding will assist begins with the collection of quantitative and qualitative data. The quantitative data will undergo analysis with the use of Excel, SPSS, and ArcGIS to produce geospatial, temporal, and longitudinal analyses. For purposes of qualitative analysis, MaxQDA will be utilized to transcribe and code interviews.

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- Cohen, A., Nelson, T., Zanutto, M., Fitch-Polse, D. T., Schattle, L., Herr, S., & Winters, M. (2024). The impact of bicycle theft on ridership behavior. *International Journal of Sustainable Transportation*, 18(5), 453–463.
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Projected Timeline

Spring 2025	<ul style="list-style-type: none">- Complete quantitative data collection from all University of Nebraska system campuses- Field questionnaire aiming to capture the attention of individuals whose bicycles were stolen on any campus- Prepare qualitative interview instrument for respondents before Summer of 2025- Clean, code, and organize bicycle theft data
Summer 2025	<ul style="list-style-type: none">- Conduct quantitative data analyses- Interview over Zoom all individuals that responded to questionnaire- Code all interviews- Test the data in relation to theoretical models- Begin drafting manuscript for publication
Fall 2025	<ul style="list-style-type: none">- Finish paper before the American Society of Criminology (ASC) Conference- Present findings while also submitting paper for publication in an academic journal
Spring 2026	<ul style="list-style-type: none">- Present research at the UNO Student Research and Creative Activity Fair (SRCAF)

Student/Faculty Mentor Roles

Dr. Ling Ren will be serving as the guiding mentor in this process, aiding in quality control of research design. Her expertise in research methods will be essential in ensuring that this study goes smoothly and produces fine results. Dr. Ren will monitor all steps of the research and writing process. The aim will be to present this study at the ASC Conference in November of 2025 and at the UNO SRCAF the following year. Publication in a respected journal of criminology is an utmost goal.

Budget Justification

This budget would allow me to focus solely on this project in the Summer of 2025 in the time between Spring and Fall semesters. Part of the budget will be allocated to attaining gift cards as an incentive for individuals to participate in the interviews. This is subject to change if there are more interviewees than anticipated. ArcGIS and SPSS are provided by the School of Criminology & Criminal Justice.

Budget Item	Description	Cost
Summer Stipend	This stipend will cover the cost of living over the Summer of 2025 (May-August). The Summer plans are estimated at 200 hours for completion	\$4500
Materials and Supplies	For attaining interview incentive in the form of gift cards	\$500
Total Request		\$5000

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Table 7. (2019). FBI. <https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/tables/table-7/table-7.xls>

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December 30, 2024

Dear Members of UNO GRACA Selection Committee,

It is with great enthusiasm that I provide this letter in support of Jordan Cline's endeavors to earn the 2025 Graduate Research and Creative Activity (GRACA) award. My recommendation for Jordan's application titled "*Riding the Risk: Understanding College Campus Bicycle Theft with a Mixed-Methods Approach*" is premised upon semester long observations of his passion for the subject as well as his "go-above-and-beyond" approach in developing this original research project.

As a new non-resident MA student, Jordan's transition to UNO was marked by the disappearance of his beloved mountain bicycle on the first day of his arrival. Similar stories of others' victimization across college campuses piqued his curiosity about studying bicycle theft. During our "topic-selection" meeting for a research proposal required for *CRCJ 8030 CJ Research, Theory and Methods*, he decided to take matters into his own hands by researching the correlates, risk factors and impacts of bicycle theft on college campuses. Throughout the semester, Jordan went above and beyond to ensure that the datasets he needs for the quantitative component of this project are made accessible to him. I am happy to share that due to his collaboration with the police departments across the campuses of the University of Nebraska, Jordan has already gained access to the redacted quantitative data from UNO/UNMC, and it is anticipated that the Lincoln and Kearney campuses will be supportive partners to this project. I am also happy to share that Jordan's stolen bicycle was miraculously "recovered" by law enforcement.

In guiding Jordan Cline's efforts to develop this research project in Fall 2024, I had the privilege to learn many qualities that he demonstrated as a talented and determined researcher, including being intellectually inquisitive, self-initiating, and willing to take a trial-and-error approach in optimizing the methods. More importantly, the relevance and significance of the topic falls within the type of social research that I am fully committed to. That is, I endorse and prioritize pragmatic and impactful research that is community-engaged and partnership-based. The mixed-methods approach including both quantitative and qualitative data proposed in this application adds a strong point to its rigor and validity. With sufficient support, Jordan's project will advance our knowledge of college-campus bicycle theft and offer valuable policy implications for campus residential life and security. The dissemination plan includes a research presentation at the 2025 American Society of Criminology annual conference, a research poster at the UNO SRCAF in Spring 2026, and ultimately a peer-reviewed article at the selected criminology and criminal justice journal.

Taken together, I am confident that Jordan Cline will make the most of this opportunity if selected for the GRACA award. I look forward to continuing to support and guide him to bring this project to fruition. Thank you for considering this application.

We appreciate your dedicated service on this committee.

Go Mavs!

Ling Ren

Ling Ren, PhD

Professor

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