

Perceived Vulnerability of Victimization and the Fear of Crime: The Effects of Minority Sexual
Orientation and Gender Identity

Diana Rodriguez

Thomas Allen

Hoda Elsafadi

Samantha Manuel

EPPS 6356 Data Visualization

December 9, 2022

Abstract

There are various factors that relate to an individual's fear of crime victimization. Existing research suggests that gender has an effect on perception of vulnerability and fear of victimization. Vulnerability is defined as the perception of being a suitable target to an offender. This study aims to contribute to existing literature on vulnerability and fear of victimization by categorizing perception of vulnerability on a non-binary scale by including minority sexual orientation (e.g., gay/lesbian/bisexual/pansexual), and minority gender identity (e.g., transgender/non-binary/non-gender conforming) as identity variables. A variety of visualizations will be used to provide greater understanding of results.

Introduction

The purpose of this study is to contribute to existing research which suggests that perceived vulnerability influences fear of victimization; however, there is a lack of literature that considers minority gender identity and minority sexual orientation groups which is necessary to better understand the relationship between perception of vulnerability and its influence on fear of victimization. By expanding gender demographics from a binary scale to a scale that includes minority sexual orientation (e.g., gay/lesbian/bisexual/pansexual) and minority gender identity (e.g., transgender/non-binary/non-gender conforming) as identity variables, we hope to better understand the differences in fear of victimization and perception of vulnerability for gender and sexual orientation. We will provide a review of existing literature, describe the methods and data collection process, describe the data and measures for our analysis and resulting outcomes concluding with a review of the limitations of our research and implications.

Literature Review

Gender has been studied extensively as a predictor of levels of fear of crime. Many studies have found that women report significantly higher levels of fear than their male counterparts (Cops and Pleysier, 2011; Sutton Farrall, 2005). There have been numerous efforts to explain this gap such many with a focus on the socialization process in which females are socialized as fearful compared to fearless men. A study by Cops and Pleysier (2011) utilized the “doing gender” thesis to develop a gender identity scale. The scale included measures of perceptions and attitudes toward activities that are seen as either masculine or feminine. The scale allowed researchers to test whether some aspects of culturally constructed gender identity may explain the gender gap seen in fear of crime. Results showed that fear of crime was not static and reported fear levels changed over time. The gender identity scale could not explain all

the gender differences; it implies that there may be additional explanations for the gender gap in fear of crime.

Majority of fear research focuses on heterosexual populations. However, there are a few that have been conducted. Otis (2007) focuses on the fear of crime and risk perceptions among self-identified lesbians and gay men. Findings indicated that women and individuals who had experienced prior victimization had higher levels of perceived risk. The perceived risk was offense-specific, and past personal victimization predicted fear of future victimization. If an individual had been a victim of property crime previously were more fearful of future property crime victimization (Otis, 2007).

Methods

Sample

Our sample was obtained through convenience sampling, which consisted of graduate students from the University of Texas at Dallas (UTD). Only students in the same classes as the researchers were permitted to participate in the study per IRB guidelines. Questionnaires were distributed online via Qualtrics to graduate student listservs available on eLearning. In total, 48 students responded to the survey, but three were removed due to incomplete responses.

Design

This is an exploratory research project that quantitatively analyses the possible moderating effect of gender on the fear of victimization. It is a multi-site study consisting of a convenience sample that analyzes for the relationship between vulnerability and the moderating effect of gender on fear of victimization. This study categorizing perception of vulnerability on a non-binary scale by including minority sexual orientation (e.g., gay/lesbian/bisexual/pansexual), and minority gender identity (e.g., transgender/non-binary/non-gender conforming) as identity categorical variables. The control variables are detailed in the “survey” section below.

To complete data collection for this project, the following processes were completed: (1) IRB approval and documentation, (2) review of previous literature and methodologies, and (3) development of an original fixed-choice survey sent to Institution Review Board (IRB) approved students enrolled at The University of Texas at Dallas. IRB approval for our adjusted survey allowed the group to collect primary data and use secondary data and existing literature to support the findings of the primary data collected. The primary data was supported by empirical and existing literature to protect the validity of the data collected. The various methods mentioned in the former secured the reliability and validity of data collected while also maximizing the power of the data as much as possible.

The following pieces of existing literature were used in the development of the adjusted survey. (1) May, Rader, Goodru (2009) examine gender differences in fear in crime, perceived risk, avoidance, and defensive behavior, finding males were less fearful than females, however they experience higher rates of victimization. (2) Steinmetz & Austin (2014) explore the fear of criminal victimization on college campus and what factors and attributes lead to varying levels of the perception of safety. (3) Jennings, Gover, & Pudrzynska (2007) identify whether institution of higher learning is safe by using self-reported campus victimization among female and male college students, having findings like May, Rader, Goodru (2009). Lastly (4) Maier & DePrince (2020) determine college students fear of crime and perception of safety both on and off campus. The aforementioned literature was used to help develop the adjusted survey for this project to ensure that questions in the survey were as minimally invasive as possible and reduced the potential for traumatization or re-traumatization to the fullest extent, while collecting appropriate data to analyze our intended hypothesis.

IRB

Before data collection could begin, each author and/or coauthor had to complete a human subject research training through the University of Texas Dallas in order to obtain IRB certification. Following that, the project design was submitted, which highlighted the objective, purpose, and intended methodology. The IRB process additionally required that researchers provide justification for the intended research, and the process of collecting data and data analysis. Researchers participated in virtual meetings with IRB staff who provided support and guided researchers through correcting errors and providing additional information about the study where needed. Researchers participated in conversation with IRB staff that provided additional information and knowledge in regard to the purpose of completing IRB applications for human research studies, and strategies for creating ethical and appropriate questions. Resubmission was required once IRB corrections were completed in the research design. After the IRB approved the research project, the post-approval activities (surveys) took place. Below are some example of corrections recommended by supportive IRB staff:

- A) Protection of participants: consider how questions can traumatize or re-traumatize the intended study population
- B) Consider “need” of questions: while asking additional questions that do not directly respond to the hypotheses is not restricted, focusing on collecting data that specifically intends to answer the hypotheses minimizes risk

Surveys were conducted on a voluntary basis. All participants had the right to agree or refuse to participate in the study. Additionally, all information provided by participants were protected and held in confidence within the limits of the law and institutional regulation. A regulatory consent form was included in the survey as required by IRB to describe the formerly mentioned voluntary intention of the survey. The researchers invited eligible students to

participate through a short in-person presentation by providing students with a web-link to the Qualtrics survey and describing the intention of the research study. Additionally, students were provided with a recruitment document in compliance with IRB standards. The following section describes the data collected in more detail. Data collected intends to respond to research hypotheses ethically, and to the fullest extent possible.

The study sample required the following inclusion criteria:

- 1) Individuals who belong to a sexual minority
- 2) College student

Survey

The surveys utilized a fixed choice survey approach to obtain the following demographic information that served as the control variables. These variables increased significance power by considering additional potential moderating variables that could influence the resulting outcomes of vulnerability and fear of victimization. Additionally, demographic variables ensured that data collected would be organized in order to provide clear and readable results. The questions included in the survey include¹:

- 1) What is your age? (18-24; 25-34; 35 and over)
- 2) What is your gender identity? (Cis-Male, Cis-Female, Transgender, Non-binary, Non-gender conforming, and Other)
- 3) What is your sexual identity? (Heterosexual, Gay, Lesbian, Bisexual, Pansexual, and Other)
- 4) Are you open about your sexual orientation/gender identity? (yes/no)

¹ See appendix A for full survey

- 5) How would you usually describe yourself? (Ethnicity) (White/Caucasian; Hispanic or Latino; Black or African American; Biracial; Asian)
- 6) Are you a graduate student? (yes/no)
- 7) Do you live on campus? (yes/no)
- 8) How safe do you feel on campus? (Likert scale 1-5)
- 9) On a scale from “Very Unlikely” to “Very Likely” how likely do you believe the following could ever happen to you?

The survey was created through Qualtrics, a service provided to students by the University of Texas at Dallas (UTD) to minimize jeopardizing data and maximize protecting research participant identity. Qualtrics is a powerful, user-friendly survey creation tool that is accessible to all UTD students – free of charge. Additionally, UTD provides virtual assistance to help students navigate the Qualtrics portal. Qualtrics can be accessed from any computer, on or off campus. Using Qualtrics was the most appropriate method of collecting survey data for this research project because of its ability to ensure the validity of data collection, protect the identity of research participants, and ensure that the survey was as easily accessible as possible. Only the author and co-authors can access the final reports of the Qualtrics survey, further protecting the identity of participants, and minimizing jeopardizing the data collected. The report was downloaded as an excel sheet and uploaded to R Studio (statistical software) for statistical analysis. Researchers completed a preliminary analysis to remove surveys that were incomplete, or contained errors. In total, three surveys were eliminated during the preliminary data cleaning process.

The following steps were taken by research participants who accepted the invitation to voluntarily participate in this research project:

- 1) Consent was obtained electronically via Qualtrics prior to accessing the survey; therefore, only participants who provided consent were able to complete the survey. The consent form structure was provided as a template by IRB in compliance of institution policy.

The consent form included the following:

- a) Studies purpose
- b) Description of project
- c) Voluntary participation
 - i) All individuals have the right to agree or refuse to participate in this study.
 - ii) Individuals who consent to participate have the right to change their minds during the study and can stop participating at any time.
 - iii) Refusal or withdrawal of participation will not involve any penalty.
 - iv) Deciding whether or not to participate will not affect class grade or education in any way.
- d) Records of participation
 - i) All of the information participants provide to investigators as part of this research will be protected and held in confidence within the limits of the law and institutional regulation.
 - ii) All responses are treated as confidential, and in no case will responses from individual participants be identified.
 - iii) Participants should be aware that while the experiment may be run from a "secure" https server, there is a small possibility that responses could be viewed by unauthorized third parties (computer hackers).

- iv) Data will be stored securely using password protected computers and access will be limited to the approved study personnel associated with this research.
 - e) The de-identified data from this study will be used for class purposes, and all data will be destroyed at the end of the current semester.
- 2) Eligible participants who provided consent were then able to access the full survey (see index). Participants could complete the survey without answering each question in its entirety. For this reason, manual data cleaning was required after data collection.
 - 3) The survey concluded by expressing appreciation to the research participants, and inviting participants to contact the research team with any questions and should they have a desire to inquire about findings and results.

The research project received 45 responses, which provided visual aids that reflect the representation of groups in the study population (pie charts and bar graphs) and were used to conduct various methods of analysis (linear regression, interaction effects model) to determine if there is potential validity or justification for future research based on the research hypotheses of gender and fear of victimization. The data collected through our adjusted survey allowed the research team to conduct a variety of analysis that measured not only the relationship between gender and fear of victimization; but, also allowed researchers to consider limitations, possible policy implications, and the need for future research.

Measures

Dependent Variables

Fear of Victimization. To examine the respondents' fear of victimization, a 5-point scale (1 = *very unlikely*, 5 = *very likely*) assessed the respondent's fear of verbal threats or harassment, and physical assault (excluding sexual assault). Specifically, we asked respondents, "On a scale

from “Very Unlikely” to “Very Likely,” how likely do you believe that the following could ever happen to you? (1) Verbally threatened or harassed, (2) Physically assaulted (excluding sexual assault).”

Perception of Vulnerability to Victimization. The analysis includes a 4-item standardized mean index that assesses the respondents’ perception of safety on and around campus (1 = *Not safe at all*, 4 = *Very safe*). Specifically, respondents were asked: “How safe do you feel? (1) On your campus (daytime)?, (2) On your campus (nighttime)?, (3) In the community surrounding your campus (daytime)?, (4) In the community surrounding your campus (nighttime)?” The index is coded such that higher values correspond to greater feelings of safety ($\alpha = .766$).

Independent Variables

Gender Identity. Respondents were given the choice of Cis-Male, Cis-Female, Transgender, non-binary, non-gender conforming, and other. For the regression analysis, the measure was recoded into a dummy variable: (0) Cis-Male, (1) Cis-Female, and (2) non-binary.

Sexual Orientation. Respondents were given the choice of Heterosexual, Gay, Lesbian, Bisexual, Pansexual, and Other. For the regression analysis, the measure was recoded into a dichotomous measure of (1) Queer and (0) Heterosexual.

Sexual Orientation Openness. To measure sexual orientation openness for respondents, except those who identified as Heterosexual, Cis-Male, and Cis-Female, were asked, “Are you open about your sexual orientation/gender identity?” The respondents were dichotomously coded such that 0 indicates no to being open about their sexual orientation or gender identity and 1 indicates yes to being open about their sexual orientation or gender identity.

Control Variables

We control for both race, age as well as living on campus in our analyses that may confound the relationships between the independent and dependent variables. To measure living on campus, respondents were asked, “Do you live on campus?” Responses were dichotomously coded such that 0 indicates not living on campus and 1 indicates living on campus.

Research Question

With the large gap of literature on the fear of victimization and perception of vulnerability for minority gender and sexual orientation groups, we want to know if they feel safe. Three research hypotheses were developed to address this question:

Hypothesis 1: Minority sexual orientation students will report a higher perception of feeling vulnerable to victimization than heterosexual students.

Hypothesis 2: Minority gender identity students will report a higher perception of feeling vulnerable to victimization than cis-gendered students.

Hypothesis 3: Students who select minority sexual orientation and minority gender identity identifiers will report a higher perception of vulnerability to victimization than students who identify with one or no minority groups.

Results

Researchers ran a multivariate regression analysis to test the relationship between the independent and dependent variables. Heterosexual individuals were found to be significantly less likely to be fearful of physical assault than those who identify as queer ($p < .01$). This remained significant even after controlling age, race, and living on campus. This significance of gender identity, however, only existed for fear of physical assault and not verbal threats. Sexual orientation was not a significant predictor for fear of physical assault or verbal threats. Additionally, gender identity and sexual orientation were not significant predictors of perceived vulnerability of victimization.

Findings of this study are highlighted in this section. Pie charts were generated to showcase the independent variables and major demographic distributions: gender identity, sexual orientation, race, and age. Box plots and regressions were generated to emphasize the effect of the independent variables, gender identity and sexual orientation, on fear of victimization, specifically physical assault, verbal threats, and perception of victimization vulnerability, in relation to campus and community safety. Respondents were separated by gender identities, heterosexual and queer sexual orientations. Interaction plots were generated to highlight possible interactions between the independent variables, sexual orientation, and gender identity. However, these interpretations cannot be extended to compare to nonbinary heterosexual individuals, as there were no participants in the sample who identified as “nonbinary heterosexual.”

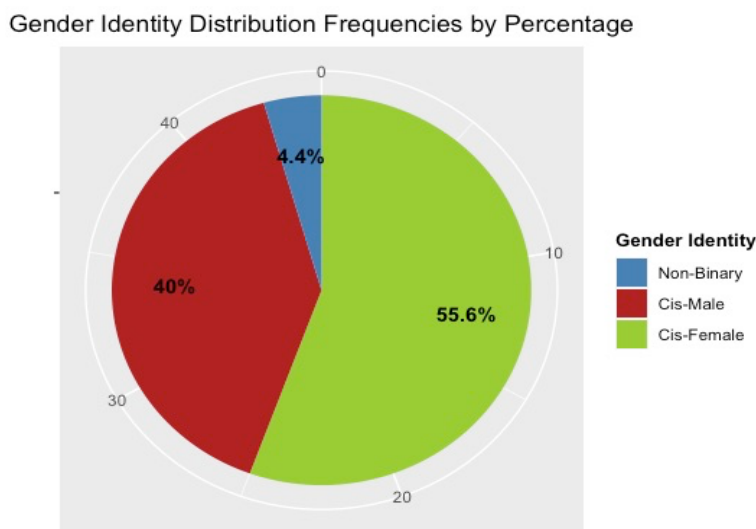


Figure 1. Gender Identity Distribution Frequencies by Percentage.

Out of 45 surveys, all but two respondents selected either Cis-Male or Cis-Female; those two respondents (4.4%) were grouped as “non-binary.” Our “non-binary” category is intended to reflect all “minority gender” groups as supported by the literature review.

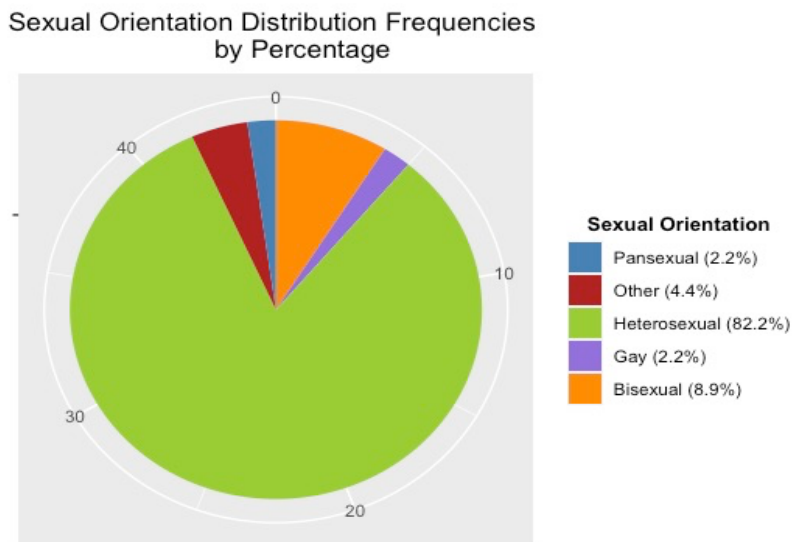


Figure 2. Sexual Orientation Distribution Frequencies by Percentage.

The total population of “minority sexual orientation” respondents make up an estimated 17.8% of the respondent population.

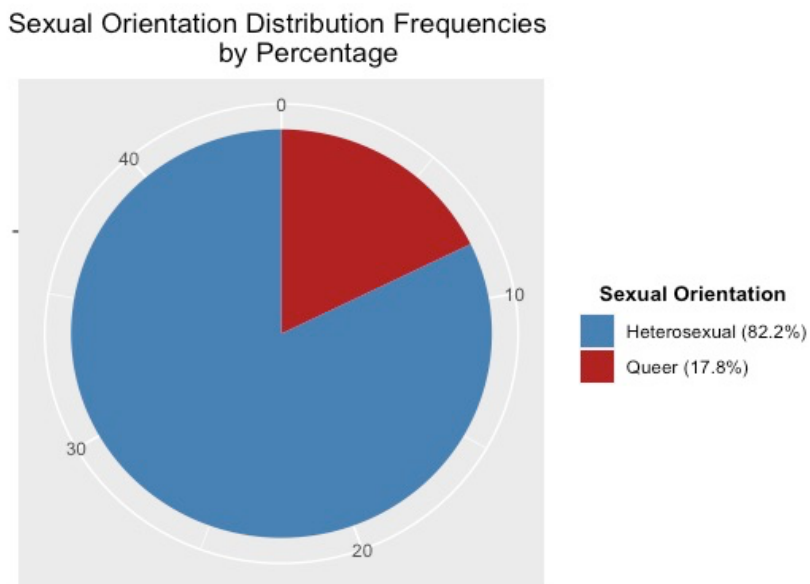


Figure 3. Sexual Orientation Distribution Frequencies by Percentage, Queer versus Heterosexual.

Figure 5. Age Distribution Frequencies by Percentage.

Survey respondents were categorized by traditional age groups of between 18-24, between 25-34 and 35 and older. Most respondents (40%) were between 18-24 years old. Approximately 73.3% of the total population responded that they were under the age of 35.

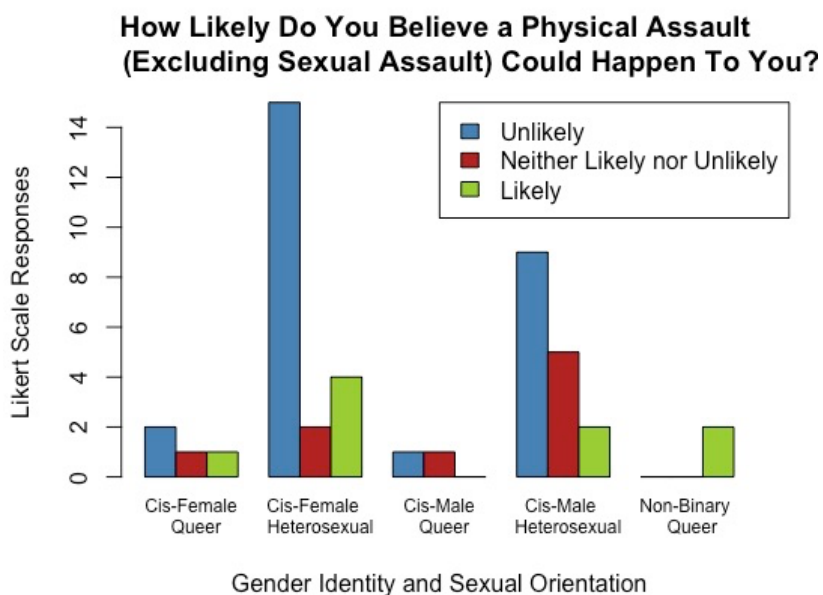


Figure 6. Likert Responses to Fear of Physical Assault (Excluding Sexual Assault), Aggregated by General Likelihood.

Figure 6 encapsulates the participants' fear of being physically assaulted, excluding sexual assault. These responses were grouped by gender identity and sexual orientation of the participants, and the responses were aggregated by general likelihood or unlikelihood. Cis-heterosexual respondents were less afraid of the possibility of being physically assaulted than both cis-queer respondents and non-binary queer respondents. Non-binary queer respondents exclusively felt they were likely to be susceptible to physical assault.

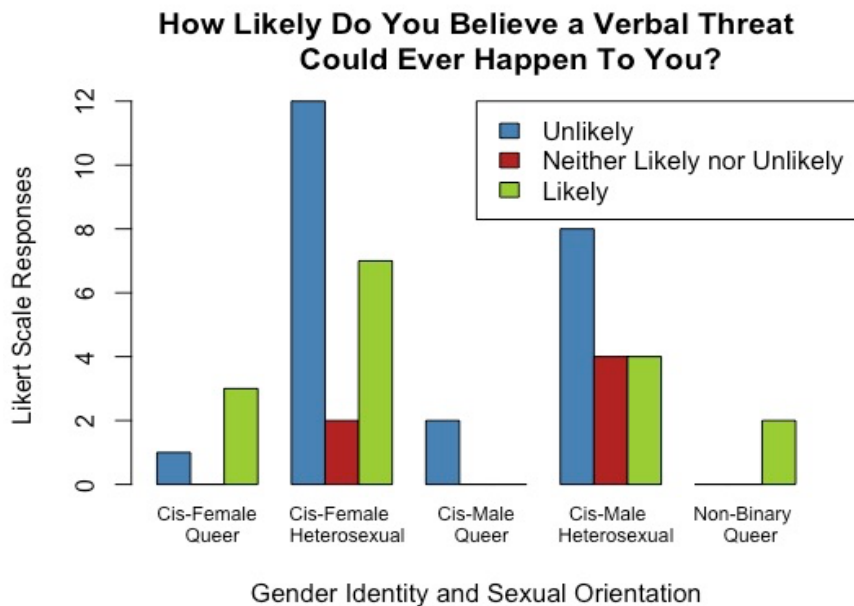


Figure 7. Likert Responses to Fear of Verbal Threat, Aggregated by General Likeliness.

Responses were grouped by gender identity and sexual orientation of the participants, and the responses were aggregated by general likeliness or unlikeliness. Cis-female respondents did have more fear of the likelihood of verbal threats than physical assault. Non-binary queer respondents exclusively felt they were likely to be susceptible to verbal threats.

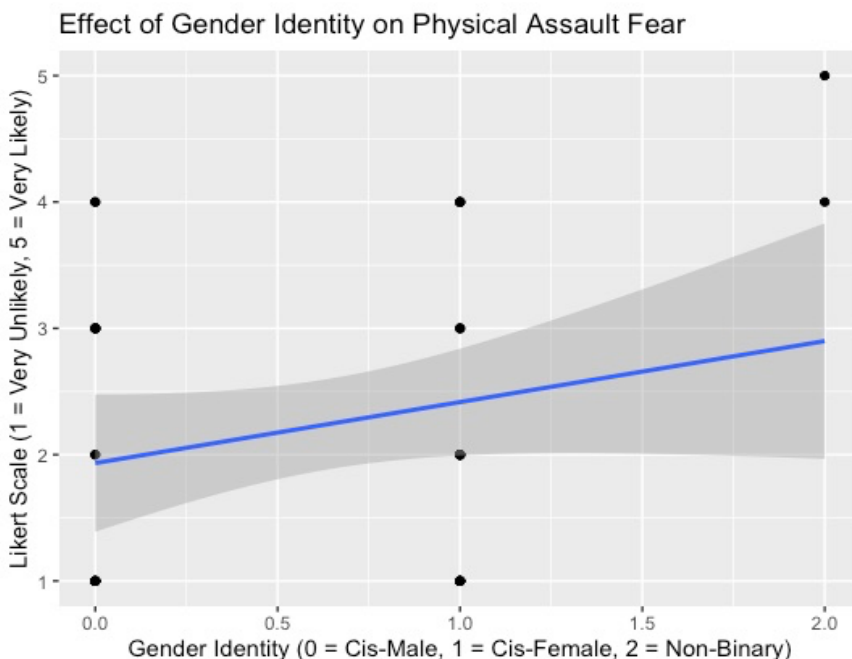


Figure 8. Regression of the Effect of Gender Identity on Physical Assault Fear.

The regression slope is a positive, rising trendline, indicating that nonbinary participants feel more fear of physical assault compared to both cis-female and cis-male respondents, and cis-females feel more fear of physical assault compared to cis-males, but less fear compared to nonbinary respondents.

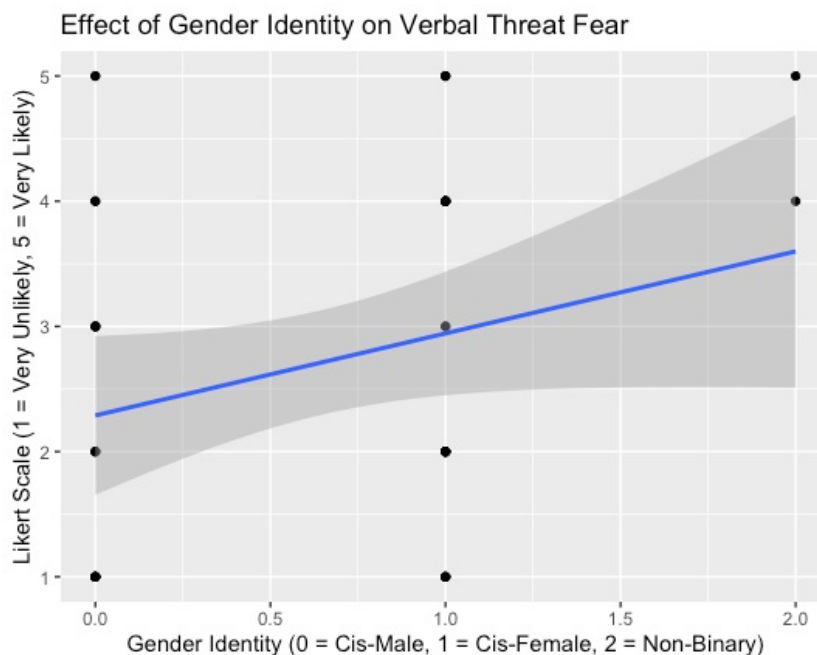


Figure 11. Regression of the Effect of Gender Identity on Verbal Threat Fear.

The regression slope is a positive, rising trendline, indicating that nonbinary participants feel more fear of verbal threat compared to both cis-female and cis-male respondents, and cis-females feel more fear of verbal threat compared to cis-males, but less fear compared to nonbinary respondents.

Conclusion & Implication

In agreement with previous research, the results indicate that an individual's gender influences their fear of victimization (Jennings, Gover, & Pudrzynska, 2007; May, Rader, &

Goodrom, 2009). The results also partially support our hypotheses regarding minority gender identity because significant differences were found between those who identify as non-binary and cis gendered on their fear of being physically assaulted. Additionally, our results did find that reported fear of victimization is higher off campus than on campus, differing from Maier & DePrince (2020), however this difference may be attributed to location, as the university sampled in the Maier & DePrince (2020) study is in a high crime area. Findings supported that students feel safer during the day than at night, both on campus and in the surrounding community.

The results of this study emphasize the importance of increased focus for universities on improving the perceptions of a safe environment for minority gender identity and sexual orientation students. Non-heterosexual students held a higher perception of vulnerability to physical assault and verbal threats, emphasizing the need for universities to ensure an inclusive environment for all students. This study reinforces the need to include demographic information surrounding gender identity and sexual orientation in future studies, as individuals with such identities can have different experiences than their cis-gender and heterosexual counterparts. It is crucial to be able to identify marginalized communities within a population to ensure resources can be appropriately allocated.

This study was not without limitations. Due to the limited sample size, it is difficult to generalize results to the population. This is compounded by the non-randomized sampling method. The use of random sampling could rectify this issue. Additionally, future research should include questions surrounding students' history of victimization. Prior victimization has the potential to provide an explanation for individual fear that may not be attributed to the tested variables. An individuals fear of vulnerability and their feelings of safety have wide sweeping

implications. Further research is needed to better understand the relationship between gender identity and sexual orientation on individual fear of victimization.

Synergy Report

The following synergy report describes the collaborative effort executed for this project. The group is composed of one graduate student who served as the primary coordinator (Diana Rodriguez) and three additional graduate students (Hoda Elsafadi, Thomas Allen, and Samantha Manuel) who together completed the objectives of this project.

The abstract and introduction section were completed by Diana. Additionally, the information in the abstract and introduction was used to request permission to conduct human research from the Institute Review Board (IRB). Diana was listed as the IRB petition primary investigator. Diana participated in the submission of the IRB petition and met with IRB staff on several occasions to review the application prior to formal submission for review by the IRB.

The literature review section was a collaborative effort between the three additional graduate students. Hoda, Samantha, and Thomas worked together to find existing literature related to the project and reviewed existing research processes and results on fear of victimization studies. Samantha first reviewed and gathered existing literature and uploaded articles to the groups shared online folder before Hoda and Thomas met independently to review literature that was used in the development of the final survey used in this project. Hoda and Thomas additionally reviewed the survey that was used as reference for this project before proposing an adjusted survey to the group. The group then met to determine if the survey would appropriately capture the data required to execute the objectives of this project. During this meeting, the group determine what questions required adjustments, and what questions would be included in the final survey intended for distribution to the student body population. Once the

group determined that the survey would be appropriate for all intents and purpose of this project, Samantha create a Qualtrics version of the survey to be distributed. The final survey was reviewed and approved by IRB before dissemination.

The results of the data collected was analyzed by the group before Thomas interpreted the results and provided the discussion section including limitations in the final study. Thomas completed this section independently because of his high level of demonstration to identify possible limitations and potential issues with the survey through the development stages.

The hypotheses questions for this projected were created as a collaborative decision between all group members. The questions were determined to be appropriate for the project and course objectives. The group additionally met to discuss the structure of the class presentation, and final paper. Meeting outside of course hours was challenging at times because of differing schedules and responsibilities outside of the course; however, all group members communicated consistently, prioritized set meeting times and demonstrated the ability to complete delegated tasks independently.

References

- Cops, Diederik & Pleysier, Stefaan. 2011. "Doing Gender" In Fear of Crime Research: The Impact of Gender Identity on Reported Levels of Fear of Crime in Adolescents and Young Adults." *British Journal of Criminology*, 51(1), 58–74.
<https://doi.org/10.1093/bjc/azq065>
- Jennings, Gover, A. R., & Pudrzyńska, D. (2007). Are Institutions of Higher Learning Safe? A Descriptive Study of Campus Safety Issues and Self-Reported Campus Victimization among Male and Female College Students. *Journal of Criminal Justice Education*, 18(2), 191–208. <https://doi.org/10.1080/10511250701383327>
- Otis, Melanie. 2007. "Perceptions of Victimization Risk and Fear of Crime Among Lesbians and Gay Men." *Journal of Interpersonal Violence*, 22(2), 198–217.
<https://doi.org/10.1177/0886260506295346>
- May, David C., Nicole E. Rader, and Sarah Goodrum. 2009. "A Gendered Assessment of the 'Threat of Victimization': Examining Gender Differences in Fear of Crime, Perceived Risk, Avoidance, and Defensive Behaviors." *Criminal Justice Review* 35(2): 159–82. doi: 10.1177/0734016809349166.
- Maier, Shana L., and Brett T. DePrince. (2020) "College Students' Fear of Crime and Perception of Safety: The Influence of Personal and University Prevention Measures." *Journal of Criminal Justice Education* 31(1): 63–81.

Appendix A

Victimization and Fear of Crime Survey Questions:

1. **Do you agree to consent to this study?**
 - a. I Agree
 - b. I Do Not Agree
2. **What is your age?**
 - a. 18-24
 - b. 25-34
 - c. 35 and over
3. **What is your gender identity:**
 - a. Cis-Male
Cis-Female
 - b. Transgender
 - c. Non binary
 - d. Non-gender conforming
 - e. Other: _____
4. **What is your sexual orientation?**
 - a. Heterosexual
 - b. Gay
 - c. Lesbian
 - d. Bisexual
 - e. Pansexual
 - f. Other: _____
5. **(IF minority orientation/gender identity) Are you open about your sexual orientation/gender identity?**
 - a. Yes
 - b. No
6. **How would you usually describe yourself? (Mark all that apply)**
 - a. White
 - b. Black or African American
 - c. Hispanic or Latino/a
 - d. American Indian or Alaskan Native
 - e. Asian
 - f. Native Hawaiian or Other Pacific Islander
 - g. Other: _____
7. **Are you a graduate student?**
 - a. Yes
 - b. No
8. **Do you live on campus?**
 - a. Yes

b. No

9. How safe do you feel?

- a. Not safe at all
- b. Somewhat safe
- c. Somewhat safe
- d. Very safe
 - i. On my campus (daytime)?
 - ii. On my campus (nighttime)?
 - iii. In the community surrounding my campus (daytime)?
 - iv. In the community surrounding my campus (nighttime)?

10. On a scale from “Very Unlikely” to “Very Likely”, how likely do you believe that the following could ever happen to you? (very likely, somewhat likely, neither likely nor unlikely, somewhat unlikely, very unlikely)

- a. Verbally threatened or harassed
- b. Physically assaulted (excluding sexual assault)