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# Relationship Between Demographic Characteristics and Sexual Victimization

## I. INTRODUCTION

Sexual violence is an epidemic across the globe, impacting individuals of diverse backgrounds and identities. Despite the widespread nature of this issue, there remains a significant gap in our understanding of its prevalence and the demographic factors that influence individual susceptibility to sexual victimization. This research aims to bridge this gap by exploring the complex ways in which various demographic characteristics such as gender, sexual identity, and race correlate with experiences of sexual violence.

The significance of addressing sexual violence is underscored by the enduring pervasiveness of rape myths and the underreporting of sexual assault cases. Rape myths continue to shape public perception of survivors and communities' responses to sexual violence, influencing the reporting behavior of victims and often leading to severe underreporting. This research seeks to delve deeper into these factors through an analytical approach that examines the roles these demographic variables play in the dynamics of sexual victimization.

Within college environments, unique social structures such as athletics and Greek life may perpetuate a culture that normalizes or prevents the recognition of sexual violence. By incorporating a comprehensive review of relevant literature and quantitative analysis, this study contributes to the critical discourse on sexual violence prevention and supports the development of targeted interventions that address the specific needs of vulnerable populations.

With the use of advanced statistical methods and a data-centered approach in Python, this paper aims to provide a detailed examination of the association between demographic factors such as gender, sexuality, race, and ethnicity, and experiences of sexual violence, in order to offer insights that could help effectively combat this issue in our society.

## II. LITERATURE REVIEW

Sexual violence is a global issue that impacts individuals of all backgrounds and identities. Despite how widespread this problem is, there is a lack of research, data, tools, and methodologies to understand the prevalence of sexual violence and what demographic factors make individuals more or less likely to experience sexual violence. This topic has only been minimally explored in existing research, indicating that there is a substantial gap in relevant literature.

Kelly and Stermac analyze what factors cause the underreporting of sexual assault, discussing the rape myth, resources and responses to victims, assault-related variables, and victim-related variables. They state that “the research reviewed on the enduring pervasiveness of rape myths supports the acceptance of such views among diverse populations. Endorsement of these beliefs is related to stereotyped and often false views of both victims and perpetrators and has wide-ranging implications for the treatment and disposition of sexual assault cases and hence the low levels of willingness to disclose” (Kelly and Stermac 33). Assault-related variables, such as the relationship between the victim and perpetrator, also play a role in determining if the assault is reported or not. In cases where the victim knew their rapist, they were less likely to report it. When it comes to victim-related variables, if the victim was dressed “provocatively” or if they did not actively resist the assault, the victim was less likely to report it due to feelings of

guilt and shame surrounding the situation and how they reacted in the moment. The authors conclude that "given the content of these attitudes and the enduring stereotypes, it is not surprising that many victims feel that they experience secondary victimization following reporting a sexual assault. As such, overall reporting rates severely underestimate the number of actual cases" (Kelly and Sternac 40). Similar conclusions were made by Griffin, Wentz, and Meinert when they specifically looked at barriers to formal disclosure of sexual assault in college students. Stereotypes about rape made college students less likely to recognize their experience as sexual assault, and the rape culture that is often perpetrated by organizations on college campuses, such as atheltics and Greek life, means that "many students perceive it as a normal part of the college experience" and thus do not report it (Griffin et al). Power dynamics also influence individuals' decisions to report sexual assault, such as the power differential between a college student and employee where the perpetrator may have a higher "status" than the victim. Furthermore, the fear of losing friends or disrupting the dynamics of a friend group made students less likely to report as the offender was more integrated into their social life. Although many causes of underreporting both on and off-campus are the same, these unique factors contribute significantly to the underreporting of sexual violence on college campuses.

Campus climate surveys are typically utilized to understand the prevalence of sexual misconduct on college campuses, asking questions about students' experiences, whether they reported the misconduct or not, and the resources they were aware of and utilized. However, these surveys "may suffer from missing data on several fronts, including both survey non-completion, and complete survey non-response" (Giroux et al). Giroux, Gesselman, Garcia, Leutke, and Rosenberg study the data that is missing from campus climate surveys, its magnitude, and its impact on understanding college sexual violence as a whole. These surveys

tend to be quantitative rather than qualitative and focus on grouping students into categories that generalize their experiences rather than treat them each as separate and unique. The researchers found that “the respondents to the campus climate survey reported here are not representative of the campus student body” and that “improving the design and administration of campus climate surveys to yield results that are more representative of the student body and students' experiences will aid in this struggle” to understand how sexual misconduct impacts college students’ lives. Campus climate surveys should be used in conjunction with other tools to measure sexual violence and more innovative data collection methods can help shape a better understanding of what this issue actually looks like on college campuses.

In a similar vein, McMahon, Cusano, Buttner, Synder, Ast, and Camerer argue that in order to address campus sexual violence, a data ecosystem needs to be created that does not rely solely on campus climate surveys to collect data about students’ experiences. These other methodologies can include focus groups, program evaluations, and tracking of students’ usage of campus resources. They assert that “it would be beneficial for campus departments to synthesize data, create measures that integrate various issues of concern, and ultimately share these findings in a cohesive way to the university community. Models are needed to determine how to develop these larger, data ecosystems and disseminate synthesized findings to the campus community” (McMahon et al). Although the University of Pittsburgh does utilize a variety of surveys, including campus climate surveys, to better understand the issue of sexual violence, these surveys tend to be highly inaccessible to those trying to understand and analyze the data collected by them, or are simply unknown and thus reach only a small portion of the student body because they are not communicated to the campus community. This not only makes it difficult for students to share their experiences in both a qualitative and quantitative context, but

also makes it difficult for researchers, such as myself, to analyze the data and answer pressing questions about the underreporting of sexual violence and what factors impact this phenomenon.

When attempting to find datasets relevant to my research question about what influences students' decisions to report or not report sexual violence, I ran into many barriers and had to consult many individuals in the field who were unable to provide me with access to datasets in a way that would allow me to answer my question. I was finally able to access data not through the University of Pittsburgh itself, but through an external contact at Georgia State University, Dr. Amanda Gilmore. Thus, a data ecosystem would allow for transparency, collaboration, and innovation that includes as many people as possible in finding a solution to the epidemic of sexual violence on college campuses rather than limiting access to data to only a select few individuals. By working together and utilizing multiple methodologies to understand this complex issue, we can better understand the intricacies of sexual violence and what we can do to make a difference.

## III. METHODOLOGY

I decided to complete my analysis of the dataset in Python. The selected features were demographic information related to gender identity, sexual identity, and racial/ethnic background, as well as the SES - victimization information. If an individual reported any sort of sexual victimization, it was coded as a 1, and if they did not, it was coded as a 0. I decided to do a chi-square test of independence to assess whether the observed frequencies in the dataset differed significantly from expected frequencies derived from a hypothesis. This will help determine if there is an association between variables in a contingency table. The output of a chi-square test includes the chi-square statistic, degrees of freedom, and the p-value, which tells us whether the observed distributions are statistically different from expected distributions under

the null hypothesis (no association between the variables). The alpha value is a threshold used in statistical tests to determine whether to reject the null hypothesis. It represents the level of significance, indicating the probability of rejecting the null hypothesis when it is actually true. The alpha value was set to 0.05, which means there is a 5% chance of concluding that a difference or association exists when there is none, or a 5% risk of a Type I error. The p-value measures the probability of observing results at least as extreme as those actually observed under the assumption that the null hypothesis is correct. A small p-value below the alpha value indicates strong evidence against the null hypothesis, leading to its rejection. For each demographic variable, a contingency table was created and printed, and then the chi-square test was performed. If the p-value was less than the alpha value, the results were labeled as "Significant" and it was concluded to "Reject the null hypothesis - There is a significant association between the variables." Otherwise, the results were "Not Significant" and it was concluded to "Fail to reject the null hypothesis - There is no significant association between the variables." The chi-square statistic, p-value, and degrees of freedom were printed for each variable. The degrees of freedom are the number of categories or groups minus the number of parameters needing to be estimated, or the (number of rows - 1) x (number of columns - 1). This reflects the number of independent ways the observed counts can vary. Next, each demographic value was also represented in both a bar chart and mosaic plot. Finally, at the end of the code, the results of the chi-square tests were printed in a table. This table listed each variable, the chi-square statistic, p-value, degrees of freedom, and whether the result was significant or not.

## IV. RESULTS

The results showed that there is a significant association between experiencing sexual violence and various demographic factors such as race, gender, and sexual identity. Specifically,

the Chi-square test for gender displayed a statistic of 123.90 with a p-value of approximately 8.16×10^-22, indicating a substantial variation in experiences of sexual violence among different gender identities. Similarly, sexual identity was also significantly associated with experiences of sexual violence, with a chi-square statistic of 50.26 and a p-value of approximately 9.63×10^−8. These results suggest that both gender and sexual identity are influential factors in the likelihood of experiencing sexual violence. The analysis of race further supported this trend, showing a significant association with a chi-square statistic of 34.95 and a p-value of about 4.41×10^−6. Each of these findings indicates a significant disparity in the incidence of sexual violence across different demographic groups.

On the other hand, ethnicity did not show a significant relationship with experiencing sexual violence in our study. The chi-square test yielded a statistic of 0.07 with a p-value of 0.964, suggesting that ethnicity does not significantly impact the occurrence of sexual violence. This lack of association could imply that the influence of ethnicity on experiences of sexual violence might be lower compared to other demographic factors such as gender, race, and sexuality.

Results of Chi-square Tests:

| | Variable | Chi-square statistic | P-value | Degrees of freedom | Significance |
|---|---|---|---|---|---|
| 0 | gender | 123.901655 | 8.157615e-22 | 10 | Significant |
| 1 | sexual_id | 50.258705 | 9.630504e-08 | 9 | Significant |
| 2 | race_NIH | 34.950391 | 4.405931e-06 | 6 | Significant |
| 3 | ethnicity | 0.072775 | 9.642664e-01 | 2 | Not Significant |

Summary of results showing that gender, sexual identity, and race were found to have a significant association with experiencing sexual victimization.

## V. DISCUSSION

The significant associations observed between gender, sexual identity, and race with experiences of sexual violence underscore the complex role of these demographic factors in influencing vulnerability to such violence. The considerable differences in the incidence of sexual violence across gender identities may reflect societal, structural, and interpersonal dynamics that disproportionately expose certain genders to risks. For instance, non-binary and transgender individuals often face systemic marginalization and discrimination, which could increase their susceptibility to violence. As a result of patriarchial social structures and rape culture, women may be more vulnerable to sexual violence as they are often objectified and sexualized, perceived as sexual objects rather than human beings through media portrayals, song lyrics, and everyday victim-blaming conversations that normalize sexual violence by drawing attention to what the survivor was doing at the time of their assault rather than rightfully blaming the assailant (Cusmano). Similarly, the significant correlation between sexual identity and sexual violence suggests that sexual minorities might encounter environments or situations that heighten their risk of victimization. This could be because LGBTQ hate crimes may take the form of sexual violence, and sexual violence rates may be impacted by excessive alcohol and drug abuse which may be more prevalent in the LGBTQ community (Tillewein et al). This is particularly evident in the elevated rates of sexual violence reported among bisexual individuals in our study. The analysis also revealed a significant association between race and experiences of sexual violence which could be a result of historic racial inequalities, economic and social oppression, and stereotypes surrounding people of color that often paint them as “stronger” than their white counterparts, minimizing their experiences of sexual violence and what they consider to be harmful (Mosley et al). Interestingly, my findings did not indicate a significant association

between ethnicity and experiencing sexual violence. This could suggest that within the context of our study, ethnicity alone does not contribute significantly to the risk of sexual violence compared to other demographic factors. However, it is essential to consider that ethnicity might intersect with other demographic variables such as race, gender, and sexuality, potentially influencing the observed patterns of victimization in ways that our study could not detect.

These findings contribute to the broader discourse on the necessity for intersectional approaches in data collection, policy-making, and sexual violence prevention programs. Interventions aimed at reducing sexual violence should consider the complex ways in which gender, sexual identity, and race intersect to shape individual experiences. Future research should aim to explore these intersections more deeply, such as through qualitative methods that can provide more detailed, authentic, and contextualized understandings of how these identities influence vulnerability to sexual violence. Case studies, interviews, and other forms of research that center individuals' stories, voices, and opinions can provide valuable guidance on how to create diverse, inclusive, and equitable sexual violence prevention programs.

Although my study provides significant insights, it is not without limitations. The data used in the analyses were cross-sectional, which limits our ability to infer causality rather than correlation. Additionally, the sample sizes for some demographic categories were relatively small, which could affect the generalizability of the findings. Future studies should incorporate both qualitative and quantitative data and ensure robust sample sizes for all demographic groups to enhance the reliability of the findings and craft solutions to the sexual violence epidemic that are sensitive to the unique experiences of marginalized communities.

To conclude, this study emphasizes the critical importance of prevention strategies that are diverse, inclusive, and equitable for people of all backgrounds and identities. By addressing

the vulnerabilities of specific populations to experiencing sexual violence, we can put an end to the sexual violence epidemic on and off college campuses and ensure that people from all walks of life feel safe, secure, and represented in sexual violence prevention initiatives.

Works Cited

Cusmano, Danielle. "Rape Culture Rooted in Patriarchy, Media Portrayal, and Victim Blaming." *Writing Across the Curriculum*, no. 30, 2018.

Giroux, Stacey A et al. “The magnitude and potential impact of missing data in a sexual violence campus climate survey.” *Journal of American college health* : J of ACH vol. 68,5 (2020): 468-476. doi:10.1080/07448481.2019.1577865

Griffin, V. W., Wentz, E., and Meinert, E. "Explaining the Why in #WhyIDidntReport: An Examination of Common Barriers to Formal Disclosure of Sexual Assault in College Students." *Journal of Interpersonal Violence*, vol. 37, no. 15-16, 2022, pp. NP14716-NP14745. https://doi.org/10.1177/08862605211016343

Kelly, Theresa C., and Lana Stermac. "Underreporting in Sexual Assault: A Review of Explanatory Factors." *Baltic Journal of Psychology*, vol. 9, no. 1/2, 2008, pp. 30-45.

McMahon, S., Cusano, J., Buttner, C., Snyder, S., Ast, R. S., and Camerer, K. "Evaluating Efforts to Address Campus Sexual Violence: Developing a Data Ecosystem." *Journal of Interpersonal Violence*, vol. 37, no. 23-24, 2022, pp. NP23563-NP23586. https://doi.org/10.1177/08862605221078817

Mosley, Elizabeth A et al. “Racial Disparities in Sexual Assault Characteristics and Mental Health Care After Sexual Assault Medical Forensic Exams.” *Journal of women's health* (2002) vol. 30,10 (2021): 1448-1456. doi:10.1089/jwh.2020.8935

Tillewein, Heather et al. “Silencing the Rainbow: Prevalence of LGBTQ+ Students Who Do Not Report Sexual Violence.” *International journal of environmental research and public health* vol. 20,3 2020. 22 Jan. 2023, doi:10.3390/ijerph20032020