**Dissertation Plan**

Thursday, 23th June 2024

Prepared by 11330596

**Manchester of University**

**Health Data science**

1. **Background**

According to the United Nations, approximately 736 million women worldwide - almost one in three - have experienced physical and/or sexual partner violence, non-partner sexual violence, or both at least once in their lifetime. The latest report from the Office for National Statistics shows that 61,158 rape crimes were committed in the year to June 2021, but the actual number of crimes may be much higher due to the extremely high under-reporting rate. Criminal Injuries Helpline offers specialist services to victims, with sexual assault referral Centres (SARC) located across the UK, offering a range of services including crisis care, medical and forensic examinations, emergency contraception and testing for sexually transmitted infections. Although it is well known that anyone can be a victim of sexual assault, existing research suggests that certain social determinants such as age, education, race, and mental health status play a role in how victims report sexual assault. Manning et al. (2019) found that 68.9% of St. Mary's SARC's clients with pre-existing mental health problems tended to report sexual assault later than those without mental health problems, and Majee-Ariss et al. (2020) reported that, The 8.2% of adults with learning disabilities in SARC often experience barriers such as difficulty understanding crime, fear of harm, limited communication, and dependence on caregivers, which in turn leads to reporting crime. However, most of the existing studies are based on the impact of a single variable on the reporting of sexual assault, but in fact, the cross-pollination of various variables jointly affects the vulnerability of sexual assault victims. Therefore, SARC must adopt a comprehensive approach of cross-analysis in its service delivery to better design targeted interventions to meet the unique needs of different survivor groups.

1. **Aims**

The primary aim of this study is to explore the differences in demographics, temporal trends, and outcomes among adult attendees at Saint Mary's SARC, focusing on subgroups defined by protected characteristics such as sexuality, ethnicity, disability, and mental health status. Specific objectives include:

1. Identifying the impact of various protected characteristics on the nature of sexual assaults reported.
2. Analyzing the time taken to report assaults across different subgroups.
3. Investigating the interplay between different protected characteristics and their combined effects on reporting behavior and outcomes.
4. Providing recommendations for improving SARC services based on the findings.
5. **Method**

**Study Design:** This study employs a cross-sectional design using epidemiological methods to analyze a dataset of 500 adult attendees at Saint Mary's SARC.

**Data Source:** The data is obtained from Saint Mary's SARC, comprising detailed records of 500 adult clients, including demographic information, details of the sexual assault, time of reporting, and outcomes of medical examinations and follow-ups.

**Variables:**

1.Independent Variables: Age, gender, sexuality, ethnicity, disability status, employment status, marital status, number of dependent children.

2.Dependent Variables: Time from assault to examination, type of sexual assault, medical and psychological outcomes.

**Data Analysis:**

1.Descriptive Statistics: Frequency distributions, means, medians, and standard deviations will be calculated to describe the demographic characteristics of the sample.

2.Temporal Analysis: Time series analysis will be conducted to identify trends in reporting times.

3.Outcome Analysis: Multivariate regression models will be used to assess the impact of protected characteristics on the outcomes of interest.

4.Cross-Tabulation: Cross-tabulation and chi-square tests will be used to explore relationships between categorical variables.

5.Logistic Regression: Multivariable logistic regression will be employed to examine the interplay between different protected characteristics and their combined effects on reporting behavior and outcomes.

**Ethical Considerations:** All data will be anonymized to protect the privacy of the clients. Ethical approval has been deemed unnecessary by the Health Research Authority for this type of service evaluation.

1. **Time Plan**

|  |  |  |
| --- | --- | --- |
| **Task** | **Period** | **Timeline** |
| literature review | 2 weeks | June 24 – July 7 |
| Data cleaning | 1 week | July 8 – July 14 |
| Descriptive Statistical Analysis | 1 week | July 15 – July 21 |
| Temporal Trends Analysis | 1 week | July 22 – July 28 |
| Outcome Analysis | 1.5 weeks | July 29 – August 7 |
| Cross-Tabulation and Logistic Regression | 1.5 weeks | August 8 – August 17 |
| Interpretation of Results | 1 week | August 18 – August 24 |
| Writing and Revising Draft | 1.5 weeks | August 25 – September 2 |
| Final Review and Submission | 1 day | September 3 |

1. **Anticipated problems**

1.Data Quality and Completeness: Incomplete or inaccurate records may pose challenges. Mitigation will involve rigorous data cleaning and validation.

2.Ethical Concerns: Ensuring the privacy and confidentiality of sensitive data is paramount. Data will be anonymized, and access will be restricted to authorized personnel.

3.Statistical Challenges: The complexity of analyzing interactions between multiple protected characteristics may require advanced statistical techniques and careful interpretation.

4.Time Constraints: The extensive nature of the analysis and the need for thoroughness may pressure the timeline. Regular progress reviews and adjustments will be essential to stay on track.

**Reference**

Criminal Injuries Helpline. “Sexual Assault & Rape Statistics - 2023 UK Data | CIH.” *Criminal Injuries Helpline*, 1 Jan. 2023, criminalinjurieshelpline.co.uk/blog/sexual-assault-data-stats/.

Majeed‐Ariss, Rabiya, et al. “The Disproportionately High Prevalence of Learning Disabilities amongst Adults Attending Saint Marys Sexual Assault Referral Centre.” *Journal of Applied Research in Intellectual Disabilities*, vol. 33, no. 3, 16 Feb. 2020, pp. 595–603, https://doi.org/10.1111/jar.12703.

Manning, Daisy, et al. “The High Prevalence of Pre-Existing Mental Health Complaints in Clients Attending Saint Mary’s Sexual Assault Referral Centre: Implications for Initial Management and Engagement with the Independent Sexual Violence Advisor Service at the Centre.” *Journal of Forensic and Legal Medicine*, vol. 61, Feb. 2019, pp. 102–107, https://doi.org/10.1016/j.jflm.2018.12.001.