Alvis Palmucci | 460270999

Research Plan

Question: What explains domestic violence rates in NSW Local Government Areas?

Hypothesis:

This research plan will firstly outline the definition of domestic violence and its prevalence within Australian society. Secondly, it will draw upon current literature and research studies to identify the key risk factors, as well as providing an overview of the data to be used. Finally, the data techniques and explanatory model to be drawn upon in an attempt to explain the independent variables that will best answer the research question will be evaluated.

Understanding domestic violence in Australia

Under the Australian Government's National Plan to Reduce Violence against Women and their Children 2010-2022, it defines domestic violence as acts of violence that occur between people who have or have had, an intimate relationship (Dunkley and Phillips, 2015, pp.1). This is further defined by The Health Costs of Violence report (2003, pp.5) as any form of intimate partner violence that can occur on a continuum of economic, psychological and emotional abuse, through physical and sexual violence.

Addressing domestic violence is a major concern for Australia's local and state authorities and according to the latest Personal Safety Survey (2016):

Women were nearly three times more likely to have experienced partner  
 violence than men, with approximately one in six women (17% or 1.6 million)  
 and one in sixteen men (6.1% or 547,600) having experienced partner violence  
 since the age of 15.

Current literature on the drivers of domestic violence

According to The Health Costs of Violence report (2003, pp.28) the most significant cause of domestic violence is gender inequality with the Personal Safety Survey (2016) indicating around one-quarter of victims are women. Cox (2015) cites a number of risk factors with women aged 25-34 years experiencing the highest rate of male intimate domestic violence of all age groups. Furthermore, women from non-English speaking countries experienced domestic violence at double the rate compared to those from English speaking countries, while women with post-school qualifications reported intimate domestic violence at 1.7 times the rate compared to women with no post-school qualifications. Stavrou et al. (2016) cite sole parents, women experiencing financial stress and those with a disability or long-term health condition as also being most at risk. Finally, the Productivity Commission report (2006) also identified Aboriginal and Torres Strait Islander women as experiencing family violence-related assaults at 32 times the rate compared to non-Indigenous females, while the latest Domestic violence statistics for NSW (2013-2017) indicates alcohol was involved in almost one-third of all domestic violence incidents.

Data sources

Relevant demographic variables on the above drivers of domestic violence will be accessed from the ABS dataset provided as well as being supplemented with additional data sources from NSW Government Health (Alcohol attributable hospitalisations) and Department of Social Services (disability payments) for each NSW LGA region.

Data techniques and explanatory model

Given the data has already been collected, the first step will be to import and clean the data for any inconsistencies. Once cleaned, descriptive analytics will be used to get a thorough understanding of the variables and to understand their distribution characteristics. Following this, a multivariate regression model will be the selected explanatory model used. The years will form the dependent variable across all the years with respect to the relevant independent variables. Given the assumptions of this model, the data will be standardised and log transformed where appropriate to understand any correlation between the variables. Once complete, the variables can then be fed into the regression model with a training and testing set incorporating k fold validation to assess the predictive performance of the model.

References:  
Dunkley, A and Phillips, J. 2015, *Domestic Violence in Australia: A quick guide to the issues*, Parliament of Australia, Department of Parliamentary Services.

*The Health Costs of Violence: Measuring the burden of disease caused by intimate partner violence*, 2003, State Government of Victoria, VicHealth and Department of Human Services.

Australian Bureau of Statistics, 2016, *Personal Safety Survey Australia*, Catalogue 4906.

Steering Committee for the Review of Government Service Provision, *Overcoming Indigenous disadvantage: Key Indicators 2016*, Productivity Commission, Canberra.

Cox, P. 2015, *Violence against women: Additional analysis of the Australian Bureau of Statistics Personal Safety Survey, 2012*, Horizons Research Report, Issue 1, Australia's National Research Organisation for Women's Safety (ANROWS).

Jan 2013-Dec2017, *Domestic violence​ statistics for NSW*, NSW Bureau of Crime Statistics and Research.

Stavrou, E, Poynton, S & Weatherburn, S. November 2016, *Intimate partner violence against women in Australia: related factors and help-seeking behaviours*, NSW Bureau of Crime Statistics and Research.