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Homework 6

Intro to Econometrics and Statistics

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Article 1: A longitudinal study of work-related injuries: comparisons of health and work-related consequences between injured and uninjured aging United States adults by: Navneet Kaur Baidwan, Susan G. Gerberich, Hyun Kim, Andrew D. Ryan, Timothy R. Church, and Benjamin Capistrant

link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6151310/>

The article is based on how age may affect someone to become more susceptible to work-related injuries and hazards within the United States. Therefore, the results demonstrate that individuals working in jobs that are physically demanding have a higher risk of experiencing injuries. Based on their research it was concluded that prolonged exposure to strenuous labor will lead to functional limitations and develop a disability that makes daily activities difficult to perform. Furthermore, the methods used in this study were using a nationally representative panel of a study of aging US adults. From this data a representative sample of the U.S population aged over 50 and surveying over 20,000 aging U.S adults. All of this data was obtained from the Health and Retirement Study. In terms of statistical analysis that were used in multivariable models developed using a Directed Acyclic Graph to show work requirements and work-related injuries as an outcome while implementing other confounding variables. Additionally, the researchers created three tables from GEE and Cox models using sample size, means, and percentages to compare the data of a variety of variables.

Article 2: Clinical correlates of workplace injury occurrence and recurrence in adults by: Zhaoyi Chen, Mattia Prosperi, Jiang Bian, Jae Min, Mo Wang, Chang Li

Link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0222603>

The article objective is to analyze the medical condition associated with a workplace injury and to modify the risk of injury recurrence. Furthermore, the data used for this case study was obtained from the bureau of labor statistics and the Healthcare Cost and Utilization Project. The methods that were used are a case-control study and a matched population of random controls. To further assess a few variables in the data set univariate and multivariable regressions with ranking predictors were used. Based on all of these statistical methods it was determined that acute bronchitis, sprains, strains of the shoulders and upper arm, overexertion, and strenuous movements are all consequences of workplace injuries. Therefore, it was concluded workplace

injury is associated with co-occurring physical conditions which cause the risk of workplace injury recurring as individual health conditions can worsen.