

My outcome of interest is **work-related accidents**

I have a total of 24,951 observations and 568 variables to choose from.

My statistical analysis will cover these but not limited to these:

STEP 1

Statistical Analysis Descriptive Statistics in R:

Description of Work-related accidents(WRA) as my outcome (dependent variable) binary variable across other covariates such as:

- Sociodemographic characteristics of workers such as Gender, Age groups, Nationality, Immigration status, and Level of education.
- Socioprofessional characteristics of workers such: Job category/class, Length of service, Type of contract, Industry/Job sector, occupational class, Size of Establishment.
- Risques at work(Psychosocial and Occupational exposures such as physical, biomechanical, biological and chemical exposures)
- Organisational Characteristics at work
- Work constraints and Rthyme
- Autonomy and Polyvalence at work
- Hours worked per week e.g full-time, part-time, night work

STEP 2

Bivariate and Multivariate Logistic Regression

Bivariate and multivariate logistics regression will be used to assess the relationship within the previous 12 months between :

- Sociodemographic characteristics of workers and work-related accidents.
- Severity and work-related accidents
- Precarious Employment and work-related Accidents

STEP 3

Negative binomial or Poisson Regression

Negative binomial or Poisson Regression will be used to assess the following:

- The relation between occupation(used as a maker of social class using CSER classification) and work-related accidents(as counts based on number of accidents)
- The relation between sociodemographic such as race, ethnicity and immigration status and work-related accidents
- The contributions of psychosocial work factors and other occupational exposures to occupational inequalities in work-related accidents.
- The relation between work-related accidents and Working Conditions (Work hours per week, Number of previous accidents, Number of days of sick leave).
- The relation between socioeconomic factors(income) and work-related accidents.

STEP 4.

Multidimensional Analysis (e.g., factorial analysis, clustering, or latent class analysis)

Multidimensional Analysis (e.g., factorial analysis, clustering, or latent class analysis) will be performed to identify patterns and disparities(inequalities) in work-related accidents across different sociodemographic and occupational groups. Using variables such as :

- Sociodemographic Variables: Age, gender, education, marital status, income, nationality(race/ethnicity), immigration status
- Socioprofessional Variables: occupation, industry sector, Type of contract, job tenure, shift work, and job class/category.
- Working Conditions Variables: Physical, biomechanical, biological and chemical exposures, workload, work hours, and how work location impacts accident likelihood.
- Health Status and Psychosocial Risk Factors: Pre-existing health conditions, fatigue, JOB STRAIN, anxiety, autonomy, and constraints.

Using Race, Ethnicity, Immigration status, and other sociodemographic variables in the model will help us see how these variables intersect with occupation, job class/category, and industry sector and how they create disparities and occupational inequalities.

IMPORTANT GUIDELINES FOR DATA ANALYSIS.

SURVEY WEIGHTS(pondcal) MUST be applied to the my analysis, since they were used in the data collection to ensure standardisation with actual countries population.

- I would need a descriptive table of the entire dataset with the NA's before handling them.
- Some variables have been coded as 8 or 9 ; and 99 or 98. I will like to describe them as they are, after which I will code them as NA's and eventually drop them.
- I will not be imputing on my outcome variable.
- I have selected variables to work on and have categorised them.
- My key variables have been recoded and I just need to add labels which I have defined.