**Data analysis Activity using R**

In the domain of behavioral research, it is essential to get a picture of how frequently specific activities occur and what this says. This report is based on the survey results to identify if respondents have faced any crime in the last 12 months of the survey period. The lack of a direct measure of crime victimization in the dataset, this study uses truancy as a measure of crime victimization. Truancy, means absenteeism from school without permission, is an indirect measure that may reveal behavioral propensities that are linked with higher likelihoods of delinquency or crime.

The analysis was conducted using R a versatile language used for data analysis and statistical computations (Wickham et al., 2023). The first operation was to read the data into R software The second step was exploratory in this step, it was important to know the structure of the data, variables and the details of the variables. To performing data exploration, R’s *`table()`* function to obtain a frequency table of the truancy variable. It is useful in rhythmic synthesis of categorical data since it counts the number of time different categories repeat. The value of 0 showed that 6,475 of the total respondents did not have truancy. 892 respondents pointed at truancy which has been assigned a score of 1. This distribution also shows that a vast number of respondents were not truant, thereby indicating that truancy is not prevalent in the sample. However, 892 respondents who claimed to have been truant points to a possibility of having behaviours associated with higher risk factors of delinquency or crime. An examination of these results offers meaningful patterns on the behaviour of the general implication arising from the foregoing finding is that the tendency for people with low truancy scores to offer high-risk activities is likely to be less likely among the respondents who failed to report truancy. The 892 respondents who indicated truancy might portray people with higher predisposing factors to develop criminal acts. This has emphasized on the correlation between truancy in students and aggressive behaviours, which is vital in enhancing the future examination of crime-related behaviours.

Statistically, it was crucial to change the truancy variable from a numeric form to a factor form in R, in order to manage it as categorical rather than continuous data. These transformations guarantee that statistical functions give the right interpretation to the variable, making subsequent modelling or analysis in the following steps more refined. Altogether, the use of the truancy variable was appropriate for the examination of the crime-related behaviour of the survey respondents. The use of the frequency table to generate and analyse the data provided relevant insights about the distribution of the truancy in the sample. This conversion of the variable to factors help to make sure that the analysis can be improved for a more proper statistical review. This approach shows how data analysis techniques can be used to deduce the behavioral patterns and predict risks which makes the identification of population parameters clearer.

## R language

df <- read.csv("C:/Users/Administrator/Desktop/Crime\_Survey\_2013\_2014.csv")

truant\_freq <- table(df$truant)

print(truant\_freq)

df$truant <- as.factor(df$truant)

str(df$truant)  
  
Frequency table Output

|  |  |
| --- | --- |
| 0 | 1 |
| 6475 | 892 |

# Reference

Wickham, H., Çetinkaya-Rundel, M. and Grolemund, G., 2023. R for data science. " O'Reilly Media, Inc.".