

# Hello World

data-to-paper

July 2, 2023

## 1 Results

The aim of our analysis was to investigate the association between Body Mass Index (BMI) and the prevalence of diabetes. To address this research question, we analyzed a large-scale dataset derived from health indicators. The dataset consisted of a total of 253,680 observations.

First, we examined the summary statistics for diabetes and BMI in the dataset (Table ??). Among individuals without diabetes, the mean BMI was 0.1838 (SD = 0.07316). In contrast, individuals with diabetes had a higher mean BMI of 0.2319 (SD = 0.08562). These summary statistics provide evidence of a higher BMI among individuals with diabetes compared to those without diabetes.

To test the association between diabetes and BMI, we conducted a chi-squared test of independence (Table ??). This statistical test was chosen because it allows us to examine the relationship between two categorical variables, in this case, diabetes (coded as "Yes" and "No") and BMI. The chi-squared statistic was 12,942.93, indicating a significant association between diabetes and BMI ( $p < 10^{-4}$ ). These findings support the presence of a strong relationship between BMI and the prevalence of diabetes in the dataset.

In summary, our analysis revealed a significant association between BMI and the prevalence of diabetes. Individuals with diabetes had a higher mean BMI compared to individuals without diabetes. The chi-squared test results confirmed the presence of a significant association between these two variables. These findings highlight the importance of BMI as a risk factor for diabetes and suggest the need for targeted interventions to address obesity. However, it is important to acknowledge the limitations of our study, including the reliance on self-reported data and the potential for confounding

factors. Further research is warranted to understand the underlying mechanisms of this association and establish causality.