

Analysis of The Effects of Social Determinants of Health Factors on Diabetes Diagnosis

Objective: For years, medical decision-making was thought to be the only inextricable factor linked to an individual's general health. However, in recent years, it has been discovered that social determinants of health (SDOH) may contribute as well. The goal of this study is to analyze the relationship between various SDOH variables and Type 1 and Type 2 diabetes.

Method: We used the 2020 Sample Adult Interview data from the National Center for Health Statistics and used only responses that included diabetes as a diagnosis. SAS 9.4 was used for data preparation and statistical analysis. The analysis consisted of descriptive statistics and binary logistic regression to verify whether education level, food insecurity, communication difficulty, poverty, and health insurance coverage had any effect on participants with diabetes.

Results: Among participants, 10.53% reported having diabetes. 40.33% of adults with diabetes have a high school or below education level. 3.09% of adults with diabetes were not covered by insurance. 8.72% of adults with diabetes had some degree of communication difficulty. 13.54% of adults with diabetes were below the poverty. Lastly, 14.07% of adults with diabetes had food insecurities.

Logistic Analysis revealed that participants with communication difficulties, a high school education or below, possessed food concerns, and were living below poverty guidelines were 2.31, 1.67, 1.84 and 1.66 times more likely to have diabetes, respectively (all with $p < .0001$ at $\alpha = 0.05$). Whereas participants without health insurance coverage were 58.6% less likely to have diabetes.

Discussion: The outcomes of the analysis support the claim that selected SDOH directly affects individuals diagnosed with diabetes.

Conclusion: Even though further research is necessary to determine its links to other chronic health conditions, it is possible to deduce from this analysis that SDOH factors have direct effects on diabetes.