

## Abstract

Understanding the role that socioeconomic status play in chronic diseases such as diabetes and coronary heart disease will provide the tools needed to address the goal of the healthcare industry, prevention care. The present study aimed to examine the relationship between socioeconomic status and diabetes as well as the relationship between socioeconomic status and coronary heart disease. The current study is a secondary analysis of the 2008 data from University of Wisconsin's Department of Population Health Sciences' National Health Measurement Study. The results found that socioeconomic status measured through homeownership, income, education level, and employment status are associated with an increased risk of diabetes and chronic heart disease. There is still a need for research on this issue because health care services are high therefore, non-clinical interventions and prevention are keys that could help. Moreover, health care disparities continue to exist, and it is essential for social workers to advocate for vulnerable populations and work towards health equity.

## Introduction

### Significance of study:

- According to the World Health Organization (2020), two of the top 10 causes of death globally are coronary artery disease and diabetes. Coronary heart disease is also especially relevant as one of the top 10 causes of death in low-income countries.

**Purpose:** To examine the impact of socioeconomic status on the incidence of diabetes and coronary artery disease.

### Research Question:

- What is the relationship between socioeconomic status and the incidence of diabetes among individuals?
- What is the relationship between socioeconomic status and the incidence of coronary heart disease among individuals?

**Hypotheses:** It is hypothesized that a low SES is positively associated with increased incidence of diabetes and coronary artery disease resulting in poorer health outcomes.

## Literature Review

- Socioeconomic status as defined by the American Psychological Association is the social standing or class of an individual group and is often measured through a combination of education, income, and occupation.
- SES often leads to issues of privilege, power, and access to resources

### Social Determinants of Health



## Methodology

- Research Design:** A secondary analysis of the data from University of Wisconsin's Department of Population Health Sciences' National Health Measurement Study, which was conducted between June 2005 to August 2006. The instruments used in the study were those used for national tracking studies and policy-focused cost effectiveness analyses of health and medical intervention.
- Sample and Sampling Method:** A total of 3844 individuals consisting of 2203 females and 1641 males from a variety of ethnic and racial background participated. The University of Wisconsin contracted with a survey product company to purchase random telephone numbers (Fryback, 2009).
- It was planned that 65-89-year-old would make up 61% of sample and 45-64-year-old making up 28% of sample. The overrepresentation of older age groups was meant to ensure enough numbers for a population whose health matters more than ever at this age.
- Measures:**
- Demographic Variable:**
  - Age. Measured as age at last birthday
  - Race. What is their first listed race and do they consider themselves of Hispanic origin.
  - Marital Status. Respondents were asked of their marital status
- Independent Variable:** Used to measure socioeconomic status
  - Work. Respondents were asked if they worked to earn money
  - Homeownership. Respondents were asked if they owned a home.
  - Income. Measured by household income total.
  - Education Level. Highest level of education completed.
- Dependent Variable:**
  - Diabetes. Respondents were asked if they had diabetes
  - Coronary Heart Disease. Respondents were asked if they had coronary heart disease

## Results

- Chi-square tests were utilized to measure the frequency of diabetes and coronary heart disease prevalence among different employment status and homeownership status groups.
- Mann-Whitney U tests were conducted to examine the impact of education level on incidence of diabetes and coronary heart disease in addition to the impact of income level on the incidence of diabetes and coronary heart disease.

Table 3

Occurrence of Diabetes and Coronary Heart Disease Among Homeownership Status Groups

	Own a home		Did not own home	
	n	%	n	%
Diabetes				
Yes	473	16.6	253	25.9
No	2379	83.4	722	74.1
Coronary Heart Disease				
Yes	339	11.9	143	14.7
No	2508	88.1	828	85.3

Table 4

Occurrence of Diabetes and Coronary Heart Disease in Relation to Work Status

	Work to earn money		Does not work	
	n	%	n	%
Diabetes				
Yes	235	11.6	490	27.0
No	1788	88.4	1323	73.0
Coronary Heart Disease				
Yes	110	5.4	373	20.7
No	1915	94.6	1429	79.3

Table 5

Difference of Income and Education Level Between Individuals with and without Diabetes

Variables	Mean rank	U	p
Income		1,209,198.50	<.001
Yes	1,332.55		
No	1,854.71		
Education Level		1,353,361.50	<.001
Yes	1,585.13		
No	1,985.27		

Table 6

Difference in Income and Education Level Between Individuals with and without Coronary Heart Disease

Variables	Mean rank	U	p
Income		851,907.50	<.001
Yes	1,349.44		
No	1,812.99		
Education Level		945,899.00	<.001
Yes	1,602.47		
No	1,948.72		

## Discussion

- Major Findings:** All the analyses results are consistent with existing research literature incorporated in this study. Consistent with the hypothesis that low socioeconomic status is positively associated with increased incidence of diabetes resulting in poorer health outcomes, results suggest that there is an association between socioeconomic status and the incidence of diabetes and coronary heart disease.
- Strengths:** Strengths of the study lies in its large sample size of 3,844 participants gathered from all over the country. It is a national sample survey meaning the participants are from different parts of the United States, therefore, can be used to get a glance of the representation of the general population.
- Limitation:** Data are from self-reports therefore, there is a likelihood of false answers. Data are a secondary analysis, therefore, gives the researcher little power regarding determining questions and variables used.
- Implications:** Findings of this study is necessary especially for social work practice and/or policy because healthcare disparities among different socioeconomic levels still exists today and it is a social justice matter. The issue needs to be addressed to evoke change within the healthcare system and hopefully, change the way it is provided to be more inclusive throughout the different socioeconomic strata. Social workers are advocates and can be involved in the legislation process through policy making. They can create grant and programs that could be beneficial to the target population.

## Selected References

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