

Chapter 17

The Effects of Social and Demographic Factors on Cardiovascular Disease

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ABSTRACT

The chapter investigates the effects of social and demographic factors on cardiovascular disease (CVD) controlling health related factors. The data used in this study is the National Health and Nutrition Examination Survey data, and are merged the three waves, 2009-2010, 2011-2012, and 2013-2014. The logit regression analysis is used as a statistical model, and the results of this study confirm the significant associations with CVD in age, race/ethnicity, marital status, and educational attainment as expected ways. Health behaviors also show significant and strong relationships with CVD, which support the current prevention and intervention programs' strategy that focuses on changing lifestyles on an individual and a community level. The results of the social and demographic factors on CVD confirm that having CVD is not only a medical or biological process but also a social outcome. Thus, a better understanding of the social and demographic factors on CVD helps us to not only reduce the mortality rate, but also develop more effective policies and programs.

INTRODUCTION

This chapter is to examine the impact of social and demographic factors on CVD. The CVD is the leading cause of death in the U.S. for both men and women (Go et al., 2014; Mensah & Brown, 2007; Mozaffarian et al., 2015). It has been ranked the number one cause of death over the last several years as in Table 1 (Center Disease Control, 2016a, 2016b; Hoyert, 2012; Xu, Murphy, Kochanek, & Bastian, 2016), although the mortality rates for CVD and other leading causes of death have been declined (see Figure 1) (Center Disease Control, 2016a, 2016b; Ma, Ward, Siegel, & Jemal, 2015). In 2010, one out of every three deaths is caused by CVD, which adds up to about 610,000 people. The direct and indirect cost of CVD totaled about \$320.1 billion as of 2008, and is expected to triple by 2030 (Go et al., 2014; Mozaffarian et al., 2015), making CVD an extremely important public health issue (Mensah, 2005).

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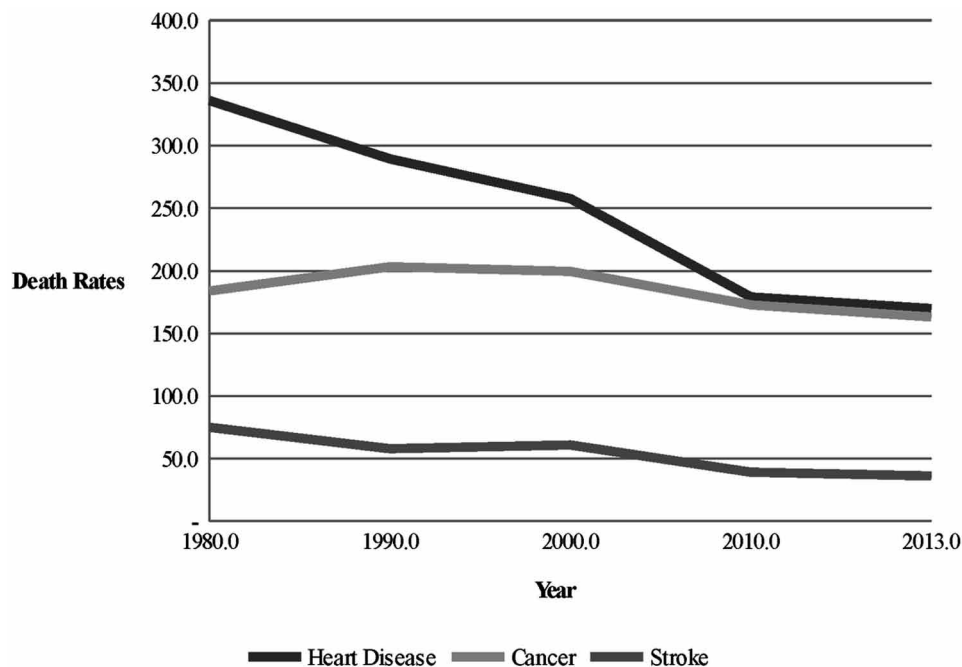
Table 1. The top 5 leading causes of deaths: 1980-2013

Ranking	1980	1990	2000	2010	2013
1	Heart Disease	Heart Disease	Heart Disease	Heart Disease	Heart Disease
2	Cancer	Cancer	Cancer	Cancer	Cancer
3	Stroke	Stroke	Stroke	CLRD	CLRD
4	Accidents	Accidents	CLRD	Stroke	Accidents
5	COPD	COPD	Accidents	Accidents	Stroke

Note: COPD - Chronic Obstructive Pulmonary Disease

CLRD - Chronic Lower Respiratory Disease

Figure 1. Mortality rates of the top 3 leading causes of death: 1980-2013



Factors Associated with CVD

Prior studies have identified health-related risk factors that make a person more likely to have CVD, including high blood pressure, high Low-density lipoprotein (LDL) cholesterol, diabetes, smoking, low physical activity, and obesity (Corella & Ordov'as, 2014; Dankel, Loenneke, & Loprinzi, 2015; Garcia-Fontana et al., 2016; Go et al., 2014; Li & Siegrist, 2012; Mozaffarian et al., 2015; Naimi et al., 2005; Ski, King-Shier, & Thompson, 2014). When someone has one or more of these conditions

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