

On the Mechanisms that Link Area-Level Social Capital and Health: Education and Healthy Lifestyles

Jangho Yoon, PhD. Affiliation: The Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, School of Public Health, University of California at Berkeley – mailto: jhyoon@berkeley.edu.

Abstract

Objectives

Arrays of studies have linked area-level social capital (SC) to various population health outcomes, proposing several different mechanisms by which area-level SC may contribute to better health. In particular, area-level SC has been conceptualized to affect information flows among individuals and in turn encourage healthy lifestyles or behaviors in communities. In addition, the effect of area-level SC on healthy lifestyles, if any, may not be homogeneous across different socioeconomic groups. Among others, education may moderate the relationship between area-level SC and an individual's investment in health since education is an important determinant of health and also may promote social participation. Building upon this conceptual relationship between area-level SC, education, and health, the present study explores whether area-level SC contributes to the promotion of healthy lifestyles, particularly leisure-time physical activities and daily consumption of fruits or vegetables. It is hypothesized that area-level SC has a larger impact on more educated individuals.

Methods

460,478 Individual-level observations were drawn from the Behavioral Risk Factor Surveillance System (BRFSS) for the years 2001 – 2005, which provides data on health-related behaviors and health status of the general population in all U.S. states and the District of Columbia. The BRFSS is a statewide telephone survey of civilian, non-institutionalized adults aged 18 and older, using a complex multi-stage cluster sample design. The individual-level BRFSS data were linked to a valid and reliable measure (contemporaneous) of SC, the Petris Social Capital Index (PSCI). The PSCI is designed to capture the structural aspect of SC. The county-level PSCI is derived from employment data on voluntary membership organizations in the County Business Patterns. Analyses are restricted to 287 counties with at least 200,000 residents to obtain adequate sample sizes in each county. Main outcome variables include a binary indicator of whether an individual's leisure-time physical activities meet the guideline recommended by the CDC and an ordered diet variable that indicates per-day servings of fruits or vegetables. Multivariate logit models of physical activities and ordered logit models of diet were estimated, including interaction terms between the PSCI and a set of education variables (college, some college, high school education, and less than high school education). All models account for the complex survey design. Covariates include individual demographic and socioeconomic factors (such as sex, age, race/ethnicity, marital status, income, and education), and county and year fixed effects.

Results

The current study finds that an increase in the county-level PSCI is significantly associated with an individual's likelihood of meeting the recommended level of physical activities. It also finds a significant, positive relationship between an increase in the PSCI and the number of per-day servings of fruits or vegetables. As expected, compared to the baseline group of individuals with less than high school education, the magnitude of the positive relationship is significantly larger for those with college-level education.

Conclusions

The findings of this study suggest that the area-level SC promotes healthy lifestyles and education is an important moderator.