Social capital and health: analysis of data from 27 European countries from European Social Survey

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Background:

Social capital, as defined by Putnam, includes characteristics of social organization, such as trust, norms, and networks that can improve the efficiency of society by enabling coordinated action. Although the role of social capital in improving different aspects of health of individuals and populations has been repeatedly studied, the role of different dimensions of social capital, and the role of individual-, community- and country-level social, economic and demographic factors in this association is still not entirely clear. Additionally, direct comparisons of such associations in multi-country settings are rare.

Aim:

The aim of this analysis was to evaluate the relationship between social capital, its dimensions and perceived health across European region in past 20 years, and to assess the role of individual socioeconomic factors, available country-level social and economic characteristics, and period of economic adversity in this association.

Methods:

Data for this analysis include more than 370,000 adults from 27 European countries included in 10 waves of the European Social Survey conducted in 2002-2020. Only countries with data available in three periods (before, during and after period of economic adversity) defined below were included in this analysis.

Measure of social capital included personal relationships, social networks and social support, civic engagement, trust and cooperative norms. Responses to number of questions were used for each dimension of measure of social capital, each dimension score was then rescaled to 0-10 scale, and overall trust score was calculated as average of the scores in all subscales.

Perceived health was used as the study outcome. Respondents were asked to evaluate their overall health by answering the question "How is your health in general?", with responses on a 5-point scale, ranging from "very good" to "very bad". Binary outcome variable was created by dichotomising poor and very poor health into poor health, with the remaining answers indicating absence of poor health.

Number of individual-level covariates such as age, sex, education, employment, marital status, religion, longstanding illness, and citizenship, as well as country-level characteristics such as GDP or GINI have been used at different stages of analysis. The period of economic adversity

was defined from 2008 until 2014, which corresponds to rounds 4 to 7. Study waves were thus classified as before, during and after the time of economic adversity, and adversity period has been also incorporated to the analysis.

The association of social capital with perceived health was assessed by multivariable multilevel regression modelling. The interaction test showed that there was no evidence of sex being an effect modifier in this analysis.

When the economic adversity period was used, the data suggested minimal evidence of its role as an effect modifier in the link between social capital and health. The interaction term for the period and social capital was on borderline of significance in unadjusted model but weakened (and become non-significant) in models including other covariates. This implied insufficient evidence for a presence of a moderating effect by the period of adversity.

Results:

There were 174,242 males and 197,392 females in study sample. 6.9% of males and 9.0 females reported poor health. Proportion of those reporting poor health increased from 1.8% among those younger than 30 years to 19.5% among those aged 70+. Among study respondents, 107,532 were from the period before, 158,926 during and 105,176 after the period of economic adversity. Sample size per country varied between 3,448 (Iceland) and 23,911 (Germany).

Low social capital was associated with increased odds of perceived poor health, even when adjusted for individual and country-level characteristics (OR 1.59, 95% CI 1.57-1.61 per 1 unit decrease in social capital score in unadjusted model and 1.32, 95% CI 1.30-1.34 in fully adjusted model). This association varied very little over the time, before, during or after the period of economic adversity.

Variance partition coefficient of less than 10% suggested that the variance in the effect attributed to country-level differences was small, indicating that the contextual country effects were relatively minor.

Discussion:

The negative effect of low social capital on perceived health has been shown in this study covering large number of European countries. It has been also shown that this effect only moderately varied between countries within European region and over the time in the past 20 years. The role of individual social characteristics influencing this association seems more important than country-level characteristics. Because of the nature of cross-sectional surveys included in the analysis, this project cannot clearly establish temporality but this multi-country study confirms previously reported findings.