

# THE ROLE OF DIFFERENT FORMS OF SOCIAL CAPITAL ON HEALTH STATUS: A COMPARATIVE STUDY IN 22 EUROPEAN COUNTRIES

ALDO ROSANO\*

PASQUALE DI PADOVA\*

\* *NATIONAL INSTITUTE FOR THE ANALYSIS OF PUBLIC POLICIES*



## BACKGROUND

Increasing health inequalities both within and between countries continue to remain a challenge for the European countries. Research consistently shows the role of social capital on health. Scientific literature put in evidence social and psychological support as a major mechanism by which social capital might improve mental and physical health and well-being.

A study of 22 European countries found that aggregate social trust and civic participation variables at the national level were not related to people's subjective health after controlling for compositional differences in socio-demographics, while individual levels of social trust and civic participation were strongly associated with self-rated health. (Poortinga, 2006)

A study of 15 geographically and socially diverse countries with different levels of income, based on WHS data, showed that health benefits are associated with most aspects of individual social capital. (Sassi, 2008)

A study of 45 countries at different levels of income based on WVS and World Bank data, showed that contextual aspects of social capital, measured at the country level, were inconsistently related to self-assessed health (Mansyur et al., 2008).



## BACKGROUND

Perceived health is a crucial concept as it is strongly linked with well-being and with demand for health services and represents a source of reliable and valid data on health status [Idler, 1997].

Inequalities in health appear in the form of a 'social gradient of health', so that in general, the higher a person's socioeconomic position, the healthier they are. Some health inequalities are attributable to external factors and conditions that are outside the control of the individuals concerned, such as age and gender.

Inequalities that are avoidable are often linked to forms of disadvantage such as poverty, discrimination and access to goods and services. Indicators such as education, occupation and income have been widely used to define socioeconomic position.



## BACKGROUND

Social capital affects health through several mechanisms: norms and attitudes that influence health behaviors, social networks that increase access to health care and psychosocial mechanisms that enhance self esteem.

A large number of studies about the links between social capital and health in different countries provide solid evidence of such relation. However, demonstrating that similar links exist across countries is substantially more challenging. Issues such as heterogeneity among countries, particularly along social and cultural lines, make cross-national empirical studies difficult. No recent comparative study on the contribution of Social Capital to health inequalities in European countries is available.

**Objective of the study: to investigate the effects of different dimensions of social capital on health status in 22 European countries, controlling for socio-demographic factors.**



- A concept with a longstanding tradition in social sciences (Coleman, Putnam, Bourdieu, Lin, Portes...)
- Yet, there is no consensus about a concise definition, while general agreement exists on its main features:
  - a) It is vital for individuals' well-being, social wealth and cohesion
  - b) It is embedded in social networks and eases cooperation, reciprocity and trustworthiness
  - c) It is a resource for social action to secure benefits by virtue of connections: people invest in each other and can mobilize the resources of others
  - d) Its main features are, therefore: trust, reciprocity and engagement in networks



Social capital has been measured in many ways by researchers.

Nonetheless, following Halman & Luijkx (2006), **four main and recurring dimensions** have been identified:

1. *Interpersonal trust;*
2. *Trust in institutions;*
3. *Social activism;*
4. *Formal engagement in social networks.*



## Data & Methods

The European Social Survey (ESS) is a biennial international survey that has involved 40 countries since 2001, and its purposes include monitoring trends in attitudes and values in European countries.

Between September 2020 and May 2021, the field phase of Round 10 of the ESS took place, involving 32 countries.

The analysis was conducted on 31,868 subjects in 22 countries with European countries that collected complete and valid information for the study.

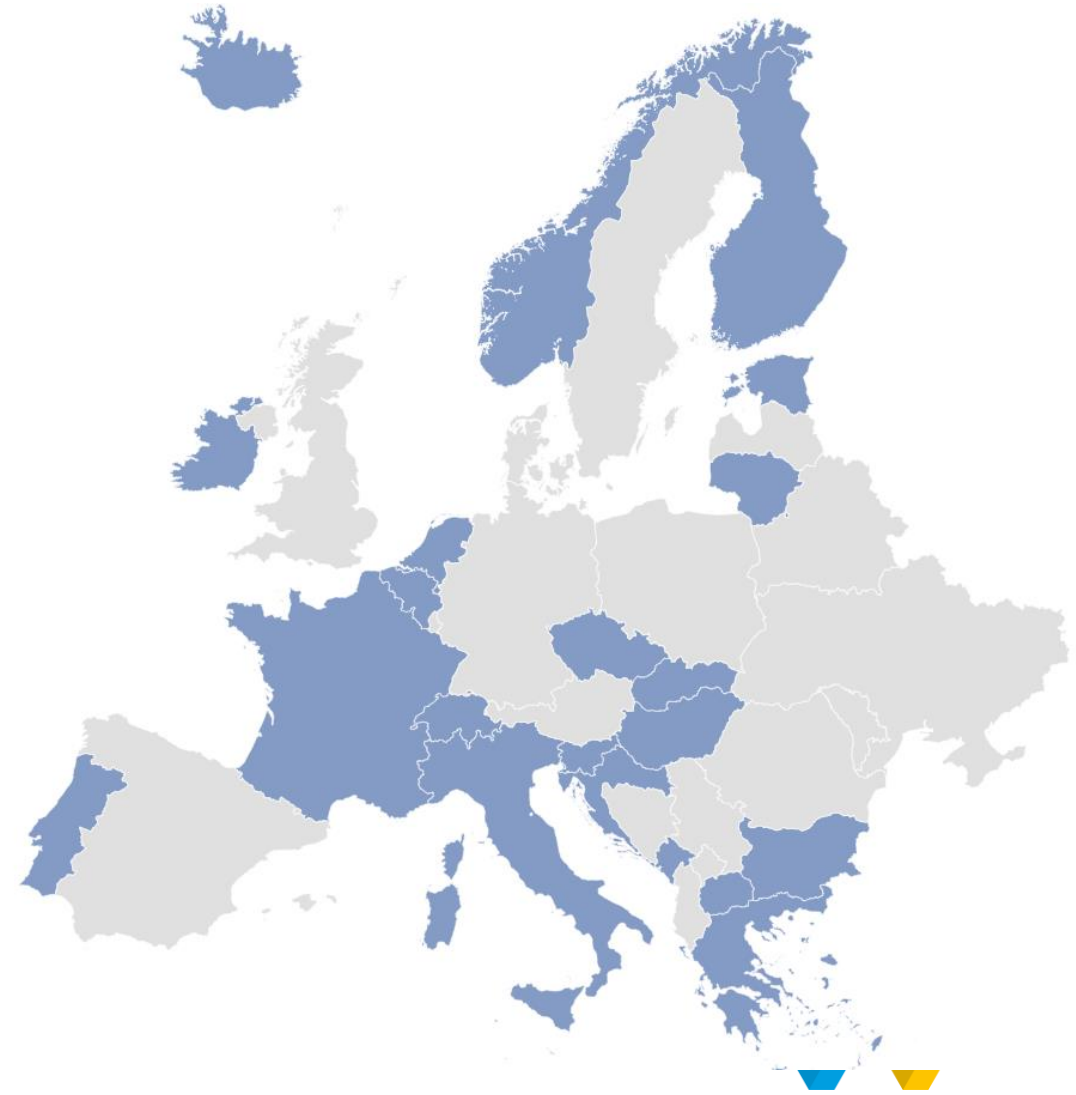
Outcome: Self-rated health reflects how respondents rated their health, answering a single-item on a 5-point scale ranging from "very good" (1) to "very bad" (5). Responses were dichotomized with "fair", "bad" and "very bad" indicating poor health and "good" and "very good" indicating good health perception.



## Data & Methods

## ESS selected countries

BE	Belgium	IE	Ireland
BG	Bulgaria	IS	Iceland
CH	Switzerland	IT	Italy
CZ	Czechia	LT	Lithuania
EE	Estonia	ME	Montenegro
FI	Finland	MK	North Macedonia
FR	France	NL	Netherland
GB	Great Britain	NO	Norway
GR	Greece	PT	Portugal
HR	Croatia	SI	Slovenia
HU	Hungary	SK	Slovakia





## Measuring Social Capital with the ESS 10 data

Dimension	Interpersonal trust	Trust in institutions	Social activism	Formal engagement
Method	PCA	PCA	PCA	MCA
Level	Cantril 0-10	Cantril 0-10	1): 7-point scale 2): 6-point scale 3): 5-point scale	1): 5-point scale 2): Dichotomous 3): Dichotomous
Questions	1) Most people can be trusted or you can't be too careful 2) Most people try to take advantage of you, or try to be fair 3) Most of the time people helpful or mostly looking out for themselves	Trust in: 1) country's parliament 2) legal system 3) police 4) politicians 5) political parties 6) European Parliament 7) United Nations	1) How often socially meet with friends, relatives or colleagues 2) How many people with whom you can discuss intimate and personal matters 3) Take part in social activities compared to others of same age	1) Able to take an active role in a political group 2) Volunteered for a not-for-profit or charitable organisation 3) Member of a trade union or similar organisation



## Data & Methods

### Methods

We used generalized structural equation modelling (GSEM) to test the relationship between social capital dimensions and socio-demographic variables on perceived health. A two-level (multilevel) model with individuals nested within the country was estimated.

SEM allows the relationship between latent and observed variables to be studied. An observed variable is one that can be measured directly, such as age or gender, whereas a latent variable can only be measured indirectly through a set of observed variables, such as social capital.

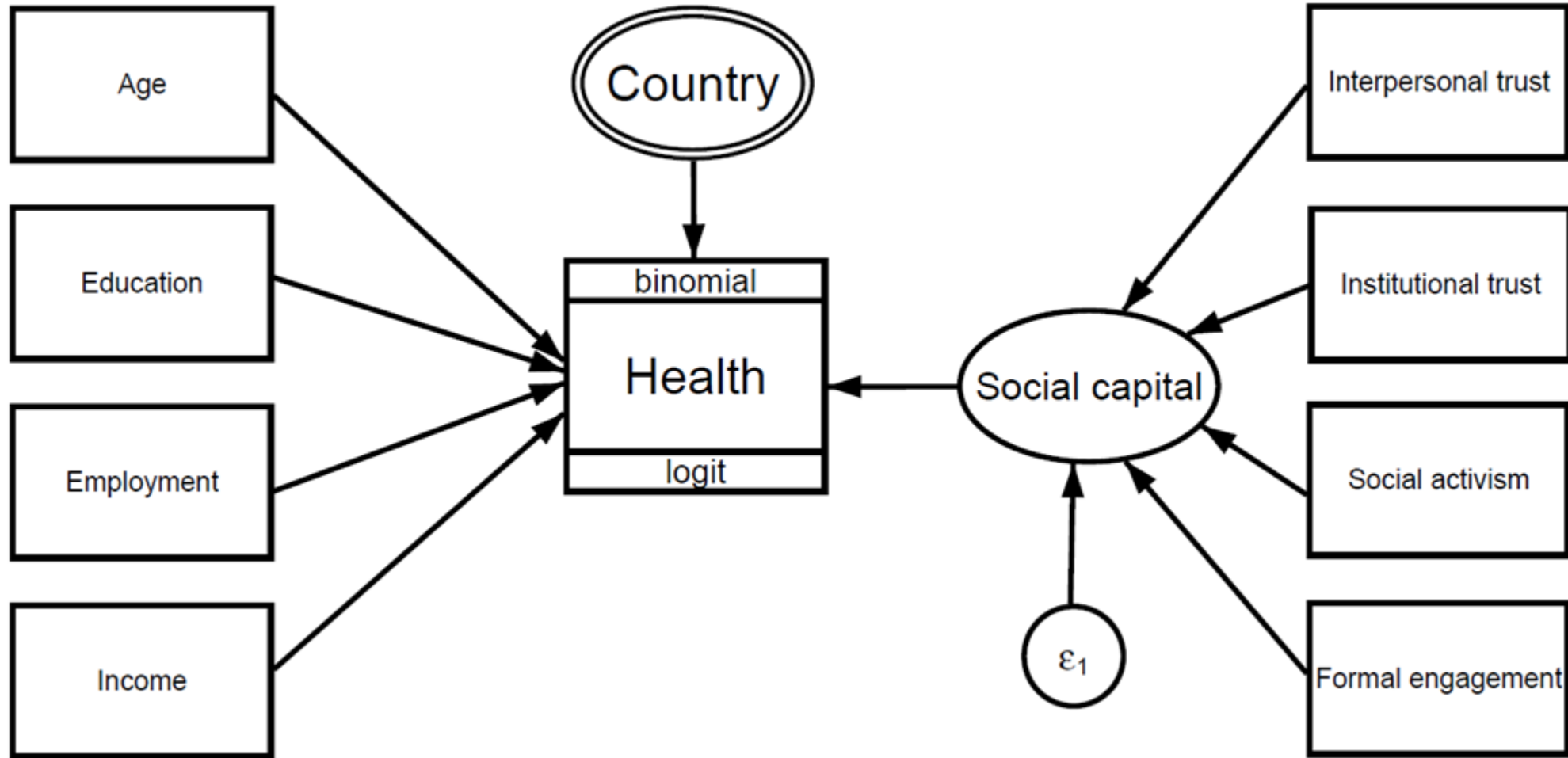
In the applied model, the latent variable measuring social capital was considered to be the result of four dimensions obtained from the PCA/MCA analysis. Observed control variables were: age, gender, employment status, economic situation, education level.

Given the nature of perceived health status variable expressed on a dichotomous scale, a multilevel logit model was proposed.



# Data & Methods

## GSEM Model



## RESULTS

*Through a multilevel model we tested the heterogeneity between countries*

*Fitting evaluation of the different models was conducted through Likelihood ratio and information criteria indexes (AIC and BIC).*

*Heterogeneity among countries was verified as well as the improvement of fitting of the final GSEM model*

		Model 0	Model 1	Model 2	Model 3
<b>Variables</b>		Empty	country	Country + Soc-Dem vars	Country + Soc-Dem vars + Soc Cap (latent)
Sex	Male (ref)			1	1
	Female			0,95	0,94
Age class	18-29 (ref)			1	1
	30-44			<b>0,59</b>	<b>0,84</b>
	45-59			<b>0,28</b>	<b>0,50</b>
	60-74			<b>0,20</b>	<b>0,38</b>
	75+			<b>0,11</b>	<b>0,21</b>
Education	Primary (ref)			1	1
	Secondary			<b>1,44</b>	<b>1,10</b>
	Tertiary			<b>1,87</b>	<b>1,32</b>
Economic situation	Very good (ref)			1	1
	Good			<b>0,59</b>	<b>0,66</b>
	Difficult			<b>0,34</b>	<b>0,38</b>
	Very difficult			<b>0,24</b>	<b>0,27</b>
Occupational status	Employed (ref)			1	1
	Unemployed			0,87	0,98
	Retired			<b>0,45</b>	<b>0,54</b>
	Inactive			<b>0,41</b>	<b>0,41</b>
<i>Social Capital</i>					
Interpersonal trust	coeff				<b>1,19</b>
Institutional trust	coeff				<b>1,10</b>
Social activism	coeff				<b>1,36</b>
Formal engagement	coeff				<b>1,03</b>
Intercept		0,65	-0,72	12,69	14,40
Variance Components	Individual Country		<b>0,22</b>	<b>0,24</b>	<b>0,25</b>
-2 Log Likelihood		37631,12	2359,86	1419,34	1,596,325
AIC		75264,25	72906,39	36513,84	23230,65
BIC		75273,23	72924,35	36641,53	23389,66



## RESULTS

*The probability of perceiving good or very good health status (PGHS) was associated with better education, good economic situation and the condition of occupied.*

*The analysis also highlights the expected decreasing probability of PGHS by age while higher education represents a clear protective factor.*

*As well as the various components of social capital were associated with good health (through Social Capital latent factor), above all social activism and interpersonal trust.*

## PROBABILITY OF GOOD HEALTH STATUS PERCEIVED

Variables		Odds Ratio	[95% Conf. Int.]	
Sex	Male (ref)	1		
	Female	0.94	0.88	1.00
Age class	18-29 (ref)	1		
	30-44	0.84	0.75	0.95
	45-59	0.50	0.44	0.55
	60-74	0.38	0.34	0.44
	75+	0.21	0.18	0.24
Education	Primary (ref)	1.00		
	Secondary	1.10	1.01	1.19
	Tertiary	1.32	1.20	1.45
Economic situation	Very good (ref)	1.00		
	Good	0.66	0.61	0.71
	Difficult	0.38	0.34	0.42
	Very difficult	0.27	0.23	0.33
Occupational status	Employed (ref)	1.00		
	Unemployed	0.98	0.84	1.13
	Retired	0.54	0.48	0.60
	Inactive	0.41	0.36	0.45
Social Capital				
Interpersonal trust	coeff	1.19	1.15	1.25
Institutional trust	coeff	1.10	1.06	1.14
Social activism	coeff	1.36	1.31	1.41
Formal engagement	coeff	1.03	1.00	1.07

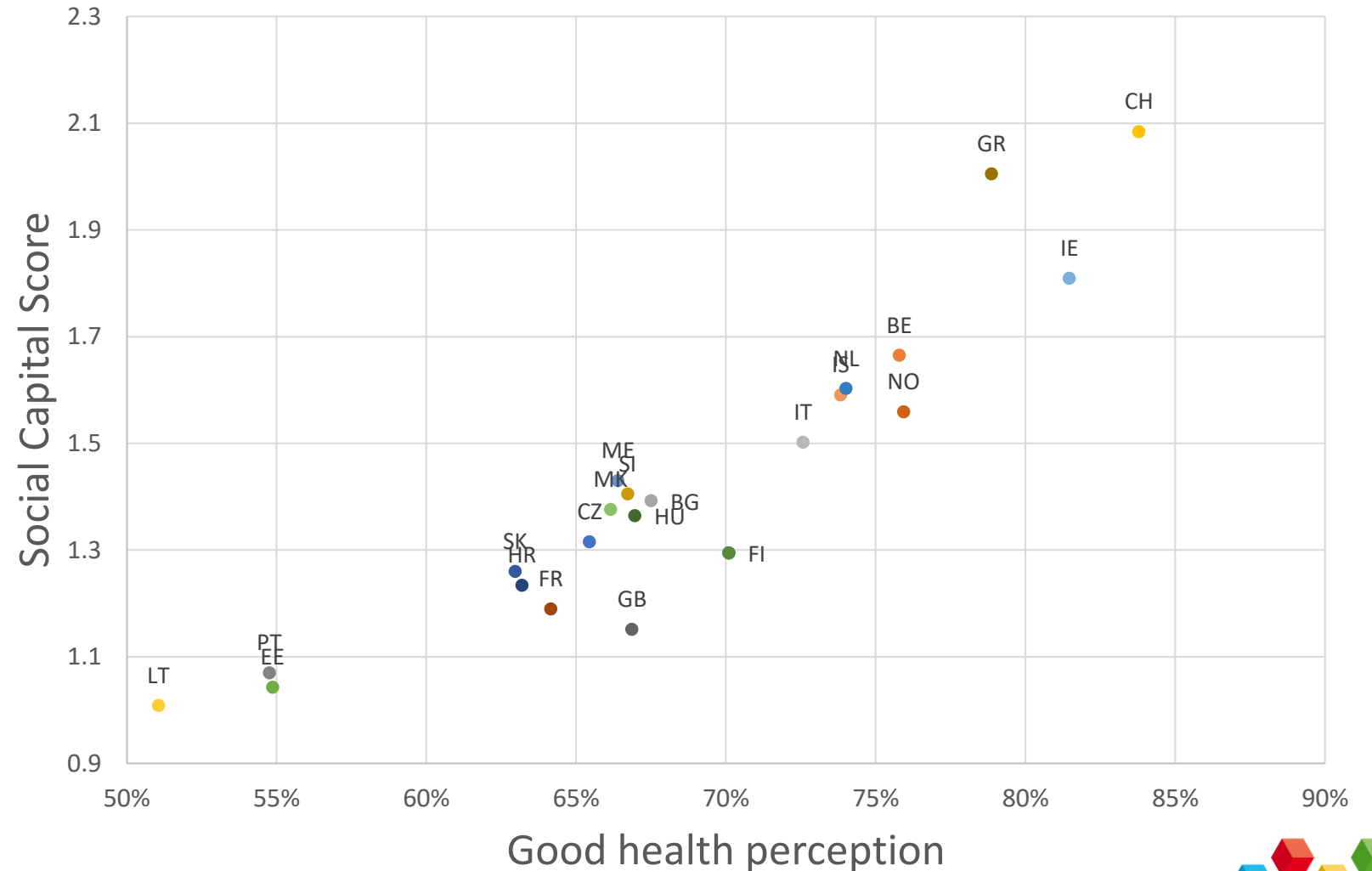


# RELATIONSHIP BETWEEN SOCIAL CAPITAL AND HEALTH PERCEPTION

## RESULTS

*Social capital score was calculated by using the GSEM model. The percentages of people declaring good or very good health were standardized by age and sex.*

*It is evident a clear linear relationship between Social Capital and good health with higher levels of those indicators in Switzerland, Greece and Nordic countries, while lower levels were found in Portugal and Eastern European countries.*



# STRENGTHS AND LIMITATIONS

## STRENGTHS

- The ESS constitutes a precious data source to collect changes in a wide range of social variables, including public and social trust, interest and participation in politics, socio-political orientations, government and its effectiveness, social, political and moral values, wellbeing, health, safety, demographic and socio-economic factors. By using such a large variety of information has been possible to define and calculate an indicator of Social Capital including different aspects and to analyse the relationship with perceived health in 22 European countries.
- Working with a broad sample of European countries, our analysis has been enriched by the diversity of cultures, values and traditions, which is a plurality that in turn influences the configuration of social capital.

## LIMITATIONS

- Analyses were conducted on cross-sectional data, which does not allow making causal statements .
- Even if the ecological influence of the country of residence was confirmed by the multilevel model, the sources of this kind of variability should be further deepened.



## DISCUSSION

*Beyond the economic and socio-demographic variables usually considered as determinants of subjective wellbeing, the focus of this paper was placed on the role of social capital.*

*The dimensions that build social capital have a positive impact on perceived health status, in particular interpersonal trust and social activism.*

*These relationships were found consistently across studied countries and this confirms the relevance of the findings.*

*There was also evidence for a country contextual phenomenon shaping the individual social capital role.*





## DISCUSSION

Although this study also seems to confirm the positive effect of social capital on health, the mechanisms through which this influence takes form are still unclear. For this reason, future research on social capital should strive to formulate more precise and empirically testable research hypotheses.

Preliminarily, there are at least three ways through which we can specify how social capital affects health:

- 1) the more extensive personal social capital is, the greater the possibility of accessing health-relevant information;
- 2) membership groups, both formal and informal, can offer support in case of illness and need;
- 3) well-organized social groups can promote collective actions to support the protection of public goods such as health.

Furthermore, to open the “black box” of social capital, future research should make an effort to:

- 1) clarify which forms of social capital have the most relevant effects on health;
- 2) specify which events along the life course can increase or decrease the accumulated social capital, and consequently have an effect on health (marriage, loss of job, retirement and so on);
- 3) identify which individuals/social groups benefit more from the resources ensured by social capital, and who instead needs support.



## CONCLUSIONS

- Thanks to GSEM we could combine measurement components to fit a variety of models that can simultaneously combine latent factors, linear and multilevel structures. Making possible to analyze in a simplified and formalized manner the structural relationships, in our case the role of social capital in the relationship between socio-economic factors and health.
- Many of these findings hold in a cross-country perspective, indicating that countries with more social capital tend to have better health on average, taking into account the different levels of socio-economic level among countries.
- The information available through the ESS survey provides an unprecedented opportunity to examine, by means of multilevel modelling, individual level data alongside macro-level data to investigate the role of social capital in shaping the distribution of health among different social groups.



## REFERENCES

- Sassi, F. (2008), “Health, Social Capital and Education in 15 Countries”, Paper presented at the OECD /IRDE S 2008 Workshop on Social Capital and Health, Paris
- Mansyur, C., B. C. Amick, R.B. Harrist and L. Franzini (2008), “Social Capital, Income Inequality, and Self-rated Health in 45 Countries”, *Social Science and Medicine*, Vol. 66, pp. 43-56.
- Idler E, Benyamini Y. Self-rated health and mortality: a review of twenty-seven community studies. *J Health Soc Behav* 1997;38:21-37.
- Poortinga W. Social capital: An individual or collective resource for health? *Social Science & Medicine* 62 (2006) 292–302
- Rocco L, Suhrcke M. Is social capital good for health? A European perspective. Copenhagen, WHO Regional Office for Europe, 2012
- Ehsan, A., Klaas, H. S., Bastianen, A., & Spini, D. (2019). Social capital and health: A systematic review of systematic reviews. *SSM-population health*, 8, 100425





# THANKS FOR YOUR ATTENTION

Aldo Rosano - [a.rosano@inapp.gov.it](mailto:a.rosano@inapp.gov.it)  
Pasquale di Padova - [p.dipadova@inapp.gov.it](mailto:p.dipadova@inapp.gov.it)



[www.inapp.org](http://www.inapp.org)