

# Enhancing Physical and Mental Health Through the Strategic Use of Social, Economic and Cultural Capital

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## Abstract

This paper delves into Pierre Bourdieu's conceptualization of capital—specifically, social, cultural, and economic capital—and its significant impact on physical and mental health (Bourdieu 1977, 1979, 1986). It explores how these three forms of capital directly affect well-being, with a particular focus on their individual and combined influences. The analysis of social capital includes four key indicators to deepen the understanding of Bourdieu's concept and its implications for health. Cultural capital is dissected into three categories as defined by Bourdieu (1986): embodied cultural capital, institutionalized cultural capital and objectified cultural capital.

The paper employs principal component analysis to identify the relationship between social, cultural and economic capital and physical and mental health. Predictive regressions are used to quantify the effects of various types of capital on health outcomes, while clustering techniques are applied to explore whether specific patterns exist within different countries.

The analysis reveals that cultural and social capital significantly influence health, beyond just economic capital. While economic capital strongly affects mental health, it has a lesser impact on physical health, influencing only subjectively reported physical health. Participation in voluntary activities and frequent family interactions positively affect mental health and physical health, respectively. Cultural capital plays a key role, with institutionalized cultural capital linked to mental health and objectified cultural capital to physical health, particularly for objectively reported physical health. These findings suggest that non-economic factors, especially social and cultural resources, are essential to understanding health disparities.

This approach aims to provide a comprehensive and detailed analysis of how social, cultural, and economic capital shape physical and mental health across diverse contexts.

## Keywords

Physical health, mental health, social capital, economic capital, cultural capital.

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## Introduction

The complex network of social determinants influencing health outcomes has been a central subject of interdisciplinary research across sociology, public health, and economics. Pierre Bourdieu, a leading figure in sociological theory, provides a solid framework for examining these determinants through his concepts of social, cultural and economic capital (Bourdieu, 1977). Bourdieu's theory elucidates how different forms of capital influence individuals' life chances, behaviors and, in the end, their health. This paper aims to explore the influence of social, cultural and economic capital on mental and physical health from a

Bourdieuian perspective, highlighting the interdependencies and disparities that characterize modern societies.

Bourdieu's conceptualization of capital goes beyond the economic sphere, incorporating social and cultural dimensions that critically shape an individual's opportunities and constraints. Social capital, defined as resources accessible through networks of relationships and social ties, plays a crucial role in providing emotional support, information and practical assistance, all of which are essential for maintaining mental and physical health. Cultural capital, encompassing education, knowledge, skills and cultural consumption, affects health by shaping health-related behaviors, attitudes towards health care and the ability to navigate complex health care systems. Economic capital, i.e. the financial resources available to an individual, has a direct impact on access to health care, nutritious food, safe housing and other determinants of health (Bourdieu, 1986).

Studies such as Abel (2008), Uphoff (2013) or Veenstra (2007) consistently demonstrate that people with higher levels of social, cultural and economic capital have better health outcomes. For example, strong social networks are associated with lower levels of stress, better mental health and greater longevity. Similarly, higher cultural capital is often correlated with healthier lifestyles, better health literacy and proactive health-seeking behaviors. Economic capital, perhaps the most direct impact, enables access to quality health care, healthier living environments and reduces financial stress that can negatively affect mental health.

## 1. Review of the scientific literature

Bourdieu (1986) rejects the conventional capitalist theory that capital must have a quantifiable and marketable value in order to be considered capital and considers that the existence of capital is not only economic in nature, but also social and cultural. In Bourdieu's conception, economic capital is not limited only to the possession of these goods, but also to the ability to use these possessions to gain advantage. We must distinguish between the two theoretical ways in which economic capital can influence a person's health. In the materialist interpretation, material resources offer more possibilities when it comes to access to health and nutrition. In the psychosocial interpretation, a lack of economic capital leads to an increase in stress and a decline in mental health.

Bourdieu (1979) defines cultural capital as the totality of knowledge, skills and education possessed by an individual. This type of capital includes both tangible and intangible cultural resources. Cultural capital can in turn be divided into three different categories: embodied cultural capital, represented by the long disposition of body and mind, objectified cultural capital, represented by cultural assets, which are considered the traces or achievements of cultural capital, and institutionalized cultural capital, a form of objectification that offers unique properties, such as educational diplomas. Institutionalized cultural capital is often used as a determinant of health in research (Muntaner, 2007). There are also articles that find a correlation between mental health and embodied cultural capital "in this form, cultural capital becomes a key component linking people's social position to behavioral aspects of health inequality" (Abel, 2008)

Social capital in Bourdieu's view describes the resources embedded in social networks and interpersonal relationships to which a person has access. Through the prism of historical view, Bourdieu deciphers how social capital becomes a major factor in the perpetuation of social inequalities and serves as a mechanism of exclusion or marginalization. One element of his analysis is that Bourdieu does not mention how this social capital should be measured. It is worth noting that Bourdieu equates power with money, thus putting the two specific types of capital, social capital and economic capital, in the balance. In Bourdieu's conception, these types of capital should not be analyzed individually, but in continuous interaction with all other types of capital.

In the scientific literature, most studies and publications have been done on the influence of social capital on mental and physical health. Ehsan et al. (2019) conduct a meta-analysis of these studies considering also how social capital is defined. Although there is a general trend showing an improvement in mental health with increasing social capital, we cannot ignore the existence of systematic reviews that are in direct contradiction depending on the type of social capital analyzed. Uphoff et al. (2013) show that for individuals in disadvantaged positions, bonding social capital improves health, while bridging and structural social capital are associated with poor health. Villalonga-Olives and Kawachi (2017) show that bonding social capital is correlated with poorer health and bridging social capital associated with improved health.

Cultural capital is the least studied in relation to mental and physical health, but it may play an important role. "If it is true that cultural capital has qualities comparable to other forms of capital, then it may also be true that the accumulation of such capital leads to improved health outcomes" (Khawaja and Mowafi ,

2006). Wilkinson et al. (2007) demonstrated that individuals' involvement in cultural activities is positively correlated with self-reported health status after controlling for socio-demographic variables. Similar studies have found a net negative effect between different types of social capital on mortality (Bygren et al., 2009; Glass et al., 1999; Konlaan et al., 2000; Hyypä et al., 2006; Väänänen et al., 2009). The limitation of these studies is the idea that these health benefits can be attributed to the increase in physical movement with participation in these cultural events and not due to these events themselves.

The mechanism by which cultural capital can influence mental and physical health is unclear, but Bygren et al. (2009), proposes three different mechanisms: the biological part focuses on the effect of social capital on brain structure and cognitive abilities, the psychological part focuses on the improvement of the expression of feelings of the individuals concerned and the philosophical part focuses on the positive effect of aesthetic experiences that help individuals conceptualize and accept their situation. Elchardus (2009), Katz-Gerro (2004), and Veenstra (2007) propose explanations closer to Bourdieu's work, whereby cultural capital can be an essential element in social hierarchy.

Economic capital has the best-researched effect on mental and physical health. Both the material and psychosocial effects, both discussed above, are well researched in the scientific literature. López-Casasnovas and Saez, (2020) conclude that there is a strong, inverse correlation between debt and health levels. Jumbri et al. (2019) find a strong correlation between the increase in the level of health and the increase in GDP per capita in the respective country. Freedman et al. (2019) treat economic capital as a buffer zone for people with disabilities and for quartiles 2 and 3 of economic capital there is a mitigation of worsening mental health with increasing levels of disability.

Pinxten and Lievens (2014) study the effect of social, cultural and economic capital on health levels and find important positive correlations for all these interactions except cultural capital on mental health.

## 2. Data and research methodology

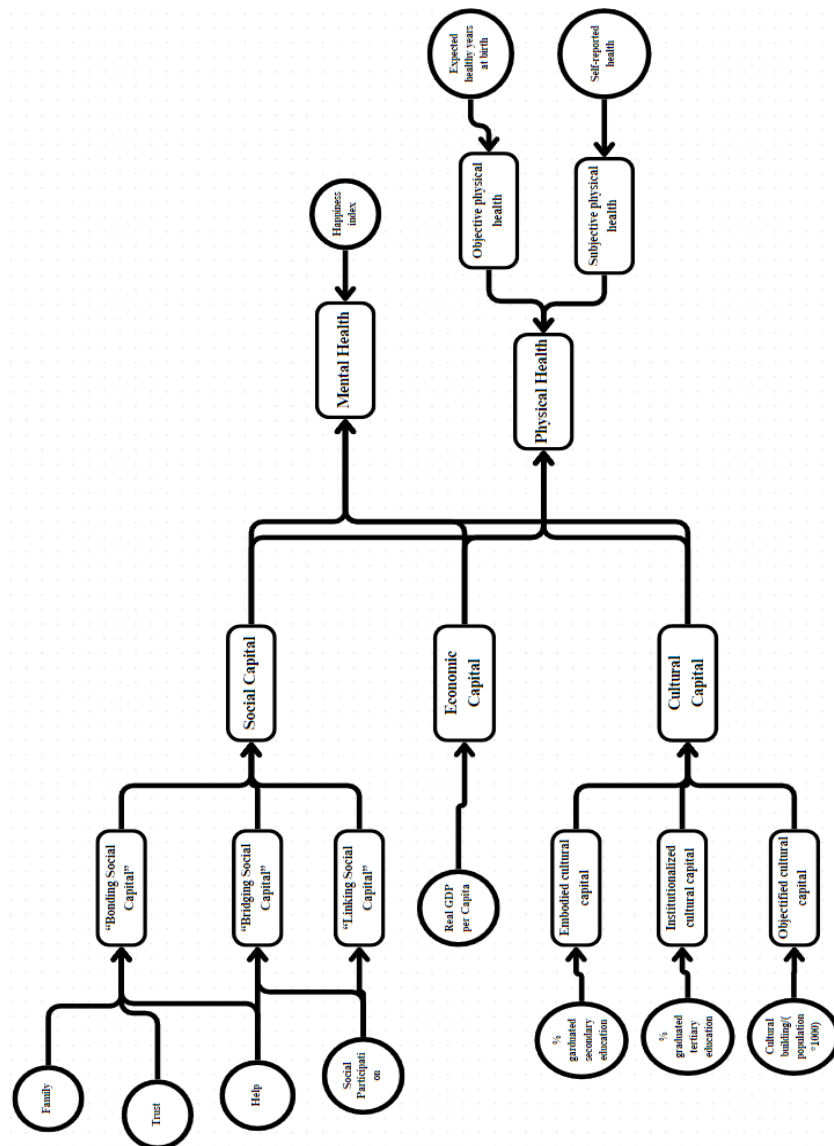
The data used in this analysis were extracted from EUROSTAT and The World Happiness Report. The data to be used in the regression models as explanatory variables are: cultural capital, social capital and economic capital. All data were selected for the year 2015, as it was the only year in which some of the measures used in this analysis were quantified on EUROSTAT in terms of social capital.

**Table no. 1. Variables included in data analysis**

Capital type	Indicator	Variable	Source data
<b>Cultural capital</b>	Embodied cultural capital	Percentage of population having completed upper secondary education (high school)	Eurostat: <a href="https://doi.org/10.2908/EDUC_UOE_ENRS04">https://doi.org/10.2908/EDUC_UOE_ENRS04</a>
	Institutionalized cultural capital	Percentage of the population having completed tertiary level education (having completed a university degree or specialization)	Eurostat: <a href="https://doi.org/10.2908/EDUC_UOE_ENRT01">https://doi.org/10.2908/EDUC_UOE_ENRT01</a>
	Objectified cultural capital	Number of cultural institutions (museums, libraries, etc) per 1000 people	Eurostat: <a href="https://doi.org/10.2908/SBS_OVW_ACT">https://doi.org/10.2908/SBS_OVW_ACT</a>
<b>Social capital</b>	Family	Frequency of getting together with friends or family	Eurostat: <a href="https://doi.org/10.2908/ILC_SCP10">https://doi.org/10.2908/ILC_SCP10</a>
	Trust	Level of trust in other people (from 1 to 10)	Eurostat: <a href="https://doi.org/10.2908/ILC_PW03">https://doi.org/10.2908/ILC_PW03</a>
	Help	Persons having someone to talk to about personal matters or ask help	Eurostat: <a href="https://doi.org/10.2908/ILC_SCP15">https://doi.org/10.2908/ILC_SCP15</a> <a href="https://doi.org/10.2908/ILC_SCP17">https://doi.org/10.2908/ILC_SCP17</a>
	Social participation	Persons participating in (in)formal voluntary activities	Eurostat: <a href="https://doi.org/10.2908/ILC_SCP19">https://doi.org/10.2908/ILC_SCP19</a>
<b>Economic capital</b>	Economic capital	Real GDP per Capita	Eurostat: <a href="https://doi.org/10.2908/NAMA_10_PC">https://doi.org/10.2908/NAMA_10_PC</a>
<b>Physical Health</b>	Objective physical health	Healthy life years projected at birth	Eurostat: <a href="https://doi.org/10.2908/SDG_03_11">https://doi.org/10.2908/SDG_03_11</a>
	Subjective physical health	Self-perceived health	Eurostat: <a href="https://doi.org/10.2908/HLTH_SILC_02">https://doi.org/10.2908/HLTH_SILC_02</a>
<b>Mental Health</b>	Mental Health	Happiness index	The Happiness Report: <a href="https://worldhappiness.report/">https://worldhappiness.report/</a>

Source: Created by the authors

The diagram below illustrates the interdependencies between the variables studies in this analysis, indicating the relationship between cultural, social and economic capital and mental and physical health. Our analysis follows a structured approach to examine the relationships between different forms of capital and their influence on physical and mental health across EU countries.



**Figure no.1. The relationship between cultural, social and economic capital and mental and physical health**

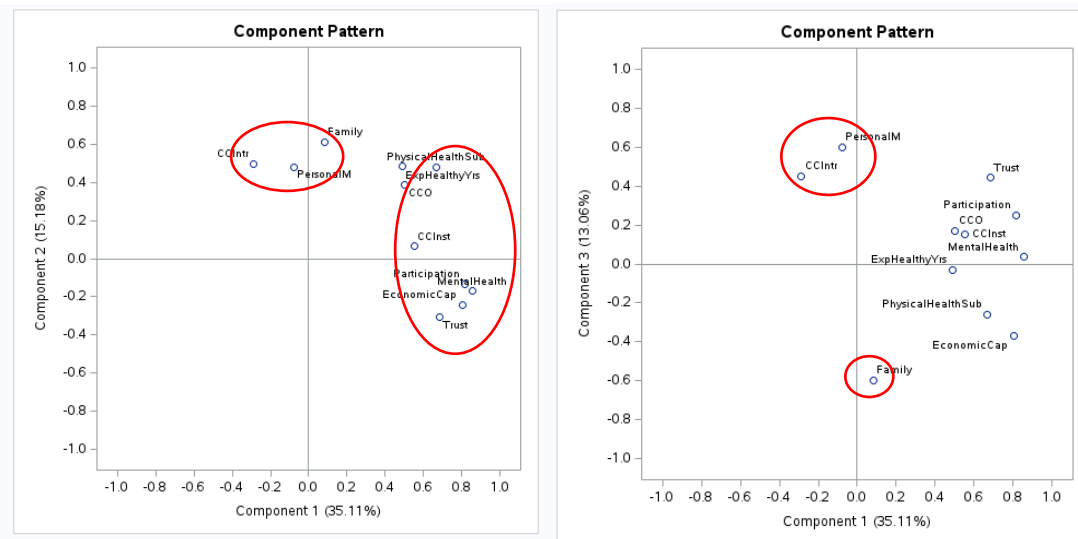
*Source: Created by the authors*

We begin by applying principal component analysis (PCA) to explore the interdependencies among all variables, including both dependent and independent variables. This helps in reducing dimensionality and identifying the most significant components that capture the variance in the dataset. Then we conduct a regression analysis to assess the impact of each category of capital (economic, social, and cultural) on physical health and then separately on mental health. This allows us to establish direct relationships between different forms of capital and health outcomes. Given the presence of country-specific variations, we perform a cluster analysis to identify patterns among EU countries based on their levels of cultural, social, and economic capital. This step helps in grouping countries with similar characteristics, allowing for a more nuanced interpretation of results. Finally, we apply a nested regression analysis based on the clusters identified in the previous step. This approach enables us to determine whether accounting for these clusters improves the explanatory power of our model in predicting physical and mental health outcomes based on cultural, social, and economic capital.

By following this methodology, we aim to gain deeper insights into the role of different types of capital in shaping health outcomes while considering country-specific variations within the EU.

## Results

By applying principal component analysis (PCA), from the initial 11 variables, three principal components were identified, each with an explanatory power greater than 1. These three components together account for 63% of the initial variance in the variables. The first principal component is mainly positively determined by trust, volunteer participation, economic capital, mental health and physical health. There are no negatively influenced variables in this component. The second principal component is mainly positively determined by family relationships, the ability to talk about personal problems, objectified cultural capital and physical health. The third principal component is mainly positively determined by trust, the ability to discuss personal problems and embodied cultural capital. It is negatively influenced by family relationships and economic capital.



**Figure no. 2.** The projection of variables onto the planes defined by the first three principal components

Source: Created by the authors

Volunteer participation, trust, mental health, and economic capital are consistently positively correlated across multiple components. Objectified cultural capital is significantly associated with both measures of physical health: objective and self-reported. Moreover, we observe an important correlation between family relationships, the ability to discuss personal problems and embodied cultural capital. Institutionalized cultural capital and objectified cultural capital are related to mental and physical health showing their combined effect on well-being.

To analyze the impact of forms of capital on physical and mental health, multiple linear regression models with interaction and without interaction between the explanatory variables were used. The dependent variables were mental health, objectively reported physical health and subjectively reported physical health. Many estimated parameters from these regressions models were not significant at 0.05 level.

*The impact of Social, Cultural and Economic Capital on Mental Health:* Using a simple linear regression model, social capital accounts for 55% of the variance in mental health. The only significant predictor is participation in volunteer activities, which has a coefficient of 0.69 and a p-value of 0.005 (Table 2 - M1). Using a multiple linear regression model without interactions, institutionalized cultural capital is a significant predictor at a 95% confidence level, with a coefficient of 0.04 and a p-value of 0.04. At a 90% confidence level, embodied cultural capital also shows significance, with a coefficient of -0.03 and a p-value of 0.07. Secondary education positively impacts mental health, while tertiary education has a negative effect. The adjusted R-squared for this model is 0.17. When interactions are included, two variables become significant at a 90% confidence level: institutionalized cultural capital (coefficient of 0.12) and the interaction between institutionalized and embodied cultural capital (coefficient of -0.001). The adjusted R-squared remains at 0.17 (Table 2 - M2). Economic capital has a positive effect on mental health, with a coefficient of 0.04 and a p-value of 0.001. The adjusted R-squared for this model is 0.53 (Table 2 - M3). A multiple

regression model including all three types of capital reveals that trust in others, embodied cultural capital, and economic capital are significant predictors with coefficients of 0.38, 0.03, and 0.04, respectively. This model provides the best prediction for mental health, with an adjusted R-squared of 0.71; however, multicollinearity presents an issue in this case (Table 2 - M4).

**Table no. 2. Result regression models**

Variables	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11
	Dependent V: Mental Health				Dep. V: Subjective Phy. Health				Dependent Variable: Objective		
Family	NS	-	-	NS	0,64	-	-	0,51	NS	-	-
Trust	NS	-	-	0,38	NS	-	-	NS	NS	-	-
Help	NS	-	-	NS	NS	-	-	NS	NS	-	-
Voluntary Participat	0,69	-	-	NS	0,68	-	-	NS	NS	-	-
Objectified CC	-	-0,03	-	NS	-	0,25	-	0,22	-	1,24	-
Institutionalized CC	-	0,044	-	NS	-	NS	-	NS	-	NS	-
Embodied CC	-	NS	-	0,03	-	NS	-	NS	-	NS	-
Economic Capital	-	-	0,04	0,04	-	-	0,05	0,05	-	-	NS
Intercept	6,2	7,31	5,22	2,76	0,05	-0,88	-1,37	-1,94	0	58,34	0
R <sup>2</sup>	0,57	0,23	0,55	0,74	0,31	0,13	0,34	0,51	0	0,31	0
Adj R <sup>2</sup>	0,55	0,17	0,53	0,71	0,26	0,1	0,32	0,45	0	0,28	0
AIC	7,36	23,3	8,44	-2,86	57,84	58,45	54,89	45,69	0	119,96	0

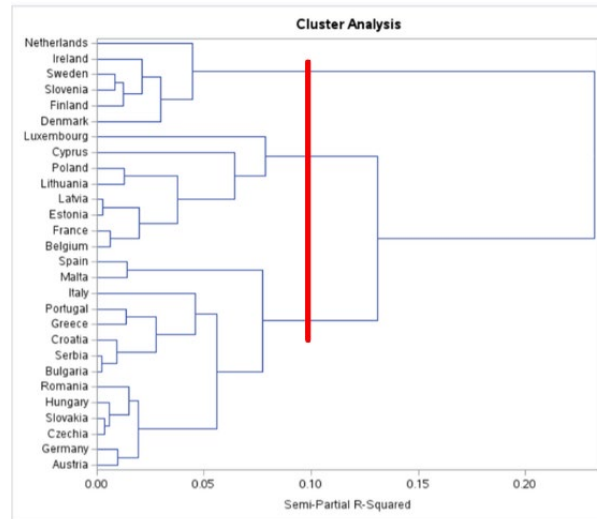
Source: Authors' contribution.

*The impact of Social, Cultural and Economic Capital on Self-Reported Physical Health:* A linear regression model without interactions reveals two significant social predictors: interactions with family, friends, and relatives (coefficient of 0.64, p-value of 0.02) and participation in volunteer activities (coefficient of 0.68). The adjusted R-squared for this model is 0.26 (Table 2 - M5). With interactions included, four variables are significant: frequency of interactions with family, friends, and relatives (coefficient of 0.73), trust in others (coefficient of 0.97), and their interactions (coefficient of 1.19). The interaction between these variables and the percentage of people who feel they have friends to confide in is also significant (coefficient of -2.03). The adjusted R-squared increases to 0.53 in this case. By applying a multiple regression model without interactions, the only significant cultural predictor is objectified cultural capital, with a coefficient of 0.25 and an adjusted R-squared of 0.10 (Table 2 - M6). When interactions are considered, the significant variable is the interaction between the three types of cultural capital, with a coefficient of 0.00008 and an adjusted R-squared of 0.16. Economic capital significantly predicts self-reported physical health, with a coefficient of 0.05 and a p-value of 0.001. The adjusted R-squared for this model is 0.32 (Table 2 - M7). Estimating a regression model including family interactions, objectified cultural capital, and economic capital identifies all three as significant predictors with coefficients of 0.51, 0.22, and 0.05, respectively. The adjusted R-squared for this model is 0.45 (Table 2 - M8).

*The impact of Social, Cultural and Economic Capital on Objective Physical Health:* Neither the regression model without interactions nor the model with interactions identifies any significant social predictors for objective physical health (Table 2 - M9). By applying a regression model without interactions, the only significant predictor is objectified cultural capital, with a coefficient of 1.25 and an adjusted R-squared of 0.28 (Table 2 - M10). For cultural capital, the only significant predictor is the interaction between the three types of cultural capital, with a coefficient of 0.0004 and an adjusted R-squared of 0.37. The linear regression model without interactions for economic capital does not produce a valid result for predicting objective physical health (Table 2 - M11). A linear regression model without interactions applied for all capital types shows that objectified cultural capital is the only significant predictor, with a coefficient of 1.26 and an adjusted R-squared of 0.27 (Table 2 - M12). When interactions are included, the interaction between objectified cultural capital and economic capital becomes significant, with a coefficient of 0.04 and an adjusted R-squared of 0.38.

By applying *Ward method for hierarchical clustering* of countries included in the analysis based on the independent variables, we obtained 3 clusters. The first cluster is represented by the Nordic countries such as Denmark, Finland, Sweden, as well as the Netherlands, Ireland and Slovenia. The second cluster is made up of the Baltic countries, Estonia, Latvia, Lithuania, as well as countries from central and western Europe, Luxembourg, Poland, France, Belgium and Cyprus. The third cluster is the largest one and contains countries from central and south-eastern Europe, such as Spain, Malta, Italy, Greece, Croatia, Serbia, Bulgaria, Romania, Hungary, Slovakia, Czech Republic, Germany, Austria, as well as Portugal and Spain.

Additionally, when examining the clustering order, we observe that countries geographically close to each other tend to cluster together, such as Austria and Germany, Romania and Hungary, Slovakia and the Czech Republic, France and Belgium, Latvia and Estonia, Poland and Lithuania, as well as Serbia, Bulgaria and Croatia. Through these clusters that emerge in the first steps, we see the close links in terms of the three types of capital of the neighboring countries. Thus, we can observe the existence of a cultural or social individualism of certain societies and we can analyze whether this particularism can positively influence our power to explain previously created regressions.



**Figure no.3. The dendrogram obtained by applying Ward method**

*Source: Authors' contribution.*

To better emphasize the importance and existence of cultural and social individualism of certain societies, we will rerun the regression created above while also accounting for the variation of the independent variables within their clusters using a nested approach.

**Table no.3. Results of the nested model**

Variables	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
	Dependent V: Mental Health				Dependent V: Subj. Phy. Health				Dependent V: Ot	
Type of Capital	Social C	Cult. C.	Eco. C.	All 3	Social C	Cult. C.	Eco. C.	All 3	Social C	Cult. C.
Adj R <sup>2</sup> before nesting	0,55	0,17	0,53	0,71	0,26	0,1	0,32	0,44	0	0,28
Adj R <sup>2</sup> after nesting	0,55	0,23	0,53	0,71	0,51	0,1	0,32	0,63	0,16	0,28
Difference	0	0,06	0	0	0,25	0	0	0,19	0,16	0

*Source: Authors' contribution.*

We observe that out of the 12 regressions, 5 can be improved by using clusters as categorization variables for the explanatory variables. From this analysis, it seems like the most important change happens within the social capital metric. Based on this, we can conclude that the presence of social individuality in certain countries influences how different types of capital interact with people's health.

## Conclusions and discussions

Following an extensive analysis of mental and physical health through the lens of Pierre Bourdieu's capital theory, we conclude that there is strong evidence supporting his assertion that, beyond economic capital, cultural and social capital also play a significant role in influencing a person's health.

When we talk about economic capital, its influence on physical and social mental health is indisputable. But in this analysis, we could see that economic capital has a greater influence on mental health than on physical health. Also, after decomposing physical health into subjectively-reported physical health and physical health reported objectively, we observe that economic capital only influences subjectively reported physical health and not the objectively reported one. Thus, for life expectancy, economic capital is not significant. This conclusion is counterintuitive, but it can be explained by the fact that this analysis is concerned with the difference between countries and doesn't take into account intra-social aspects.

At the social capital level, participation in voluntary activities has an influence on mental health, while the frequency of relationships with family and friends is correlated with physical health. When we decompose physical health into objectively reported physical health and subjectively reported physical health, we observe that the frequency of family relationships is only influential for subjective health, whereas subjectively reported physical health is not correlated with any type of social capital.

At the level of cultural capital, institutionalized cultural capital is the only significantly correlated with mental health. For physical health, the only type of cultural capital significant is objectified cultural capital. After decomposing physical health into health subjectively reported physical health and objectively reported physical health, we observe the persistence of objectified cultural health as a significant factor for both dependent variables, but the correlation is stronger for objective physical health.

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