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THE GREEK UNIVERSITY STUDENT'S SOCIAL CAPITAL DURING THE COVID-19 PANDEMIC

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Abstract:
The COVID-19 pandemic has had an impact on people's social interaction and has brought about changes in key social institutions, such as education or economy. The individuals' social capital in a context, characterized by the limitation of their social activities, social distancing, minimization of face-to-face communication, is considered a very important and necessary element for social inclusion. This paper examines the university students' social capital during the pandemic period. The research followed the quantitative design and the sample of the research consisted of 260 university students. The results of the research showed that in the spatiotemporal context of a society affected by the COVID-19 pandemic, high social capital can create the proper conditions for positive social relations and student interactions. Cognitive development does not seem to differ from social capital.

Keywords: social capital, university students, COVID-19

1. Introduction

The new health crisis that has been affecting the entire planet has led to the implementation of restrictive measures in the social interaction of individuals. Social isolation and the distancing of social actors have been among the main measures implemented, both in the labor market and education. (Adolph et al., 2020; Viner et al., 2020). Supranational and national restrictions on the movement of people and goods, and the ideological compulsion of societies to adapt to them through fear, further legitimize

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the structural features of globalization, rather than deconstructing or altering them. Egocentrism, the "weakness" of the nation-state, the disintegration and threat of community, the inability to manage fear, the increase in unemployment rates and risk (Hall 2003), are reinforced and shape a new way of life. Local, regional and global coexist in the individual's home. Space and time are compacted, while social networks and social interactions are mediated more than ever by digital reality. ICT and information dominate and demonstrate the inability of the individual to act critically towards true information or fake news on the Internet and social media (Casero-Ripolles, 2020; Vosoughi et al., 2018). World capitalism is being strengthened, while production and consumption are being networked (Ragnedda, & Muschert, 2013). In this context, the social capital of social actors is a factor that mediates their experiential integration into the new social reality, but also a social factor that is being challenged.

1.1 Theoretical framework

Social capital is approached as the aggregation of real, symbolic or virtual resources that are connected to multiple networks; it is sustainable and associated with institutionalized mutual acceptance and relations of recognition (Bourdieu, 1986. 2001. Bourdieu & Wacquant, 1992). Social capital consists of social relationships that are developed within the group and is renewed by people's daily life interactions on various social networks. It is based on the principles of trust, reciprocity and rules of action, achieving mutual benefit (Bullen & Onyx, 1998. Coleman, 1988). According to Putnam (2000), social capital is itself a social formation and it facilitates action and cooperation for the common good. Mac Gillivray (2002) also refers to social capital as a feature of the community that facilitates its operation. A distinction made in the theory of social capital refers to the bonding social capital and to the bridging social capital. The first regards the social networks that are created between the members of a group, who know each other, while the second is concerned with the social networks that connect the two groups (Putnam, 2000).

Social capital is linked to a multitude of political outcomes, which are reflected in better quality of life, in educational achievements, in achieving a high level of democracy, but it is also mentioned as a characteristic of communities (Fukuyama, 1995. 2001; Putnam, 2000). Strengthening social relationships and social organization (trust, social networks and rules) can improve the effectiveness of society (Putnam et al., 1993: 167). So, the more social capital is used, the more it is developed and the more positive results it brings (Coleman, 1988: 106). Strengthening social capital is a matter of democracy, ensuring the vitality of community life and building social trust. The relationship between social capital, health, education, politics, the environment, and the economy has been examined and highlighted in many studies in recent years (Backhaus et al., 2020; Koutras et al., 2020; Poupou, 2010; Sarracino & Mikucka, 2016; Tsounis & Sarafis, 2016; Yoon et al., 2017). In the educational context, social capital is related to the transmission of knowledge and the effective organization of learning (Kent et al., 2019). Criticism exists due to the emphasis of international literature on the positive effects of social capital and the lack of recognition of negative points (Sotiropoulos, 2006). Woolcock (2001) refers to

its indiscriminate use in every aspect of sociological thought, which often takes the form of social fashion. Portes (1998) finds that social capital can be a factor of social exclusion, as it enhances the cohesion of the inner group and its permeability, which makes it difficult for other individuals to be included in a social group, but also as a factor in homogenizing behavior, which in some social situations (e.g. following health guidelines) can cause problems (Villalonga-Olives, & Kawachi, 2017).

Social capital in its conventional form, as described above, has been challenged in the age of the COVID-19 pandemic. Considering the measures and social isolation imposed to address and reduce the spread of the virus, one realizes that social capital in its conventional form has been tampered with. Changes in the mediation context of social capital affect the social and political involvement, commitment, and participation in civil society or in various social and political organizations (National Statistics, 2001; Putnam, 2000). In the very recent and still incomplete bibliography on social capital, there are conflicting views on the effects of the pandemic on the individual and their social relations. Researchers believe that pandemics have a negative effect on both the psychosomatic health of a person by increasing stress and anxiety, and on the sociability of a person by reducing social interactions and lacking of human contact. On the other hand, there are those who support the viewpoint that the pandemic has had a catalytic effect on the reduction of stressful factors and the strengthening of solidarity and social mutual support of individuals (Bai et al., 2020; Parks, 2020; Xiao et al., 2020).

2. Social capital and university students

In the international literature, the social capital of university students is linked to academic performance and cognitive development of the individual. A high social capital supports students' increased academic achievement and cognitive function (Almeida et al., 2019; Peng, 2019; Mishra, 2020). The effectiveness of high social capital is due to the utilization of the information and support it receives through its available powerful social networks (Almeida et al., 2019). Moreover, other researches show that the social and friendly networks developed by teachers and educators contribute positively to the dissemination of reforms and innovations in education and the production of new knowledge and educational practices (Cole & Weinbaum, 2007; Coburn & Russell, 2008: 203-235; Moolenaar et al. 2009: 13-17). At the same time, it has been found that an enhanced social capital is associated with social cohesion and greater individual participation in social interactions (Algan et al., 2013). Social interactions provide the academic community with the opportunity to build trust among its members (Moolenaar et al. 2009: 13-17), but they also have significant positive effects on personal life. As Bourdieu (1986) points out, the more one interacts with people of different specialties and interests, the more one interacts with their cultural capital and multiplies the opportunities for accessing knowledge. University students with high social capital form better relationships with their teachers and other university students (Koutra et al., 2020; Mato & Tsukasaki, 2019; Peng, 2019). Social interaction patterns can enhance or reduce students' social cohesion and trust among themselves and between faculty and students,

as well as supporting the learning and knowledge produced and reproduced in the university (Karpov, 2017; Weidman, 2006). At the same time, it has been found that university students with high social capital have the opportunity to continue and maintain their efforts more effectively (Almeida et al., 2019). Finally, the high social capital of university students has been associated with better quality of life, mental health and pleasure that university students receive from their academic context (Bye et al., 2019; Koutra et al., 2020). The existence of high social capital contributes positively to the quest and provision of support for the enhancement and promotion of mental resilience and through social participation and commitment to addressing current social issues (Doll et al., 2009).

The conditions created in the academic environment by the pandemic and the imposition of social distancing, transform the way the members of the academic community interact (Ferrel & Ryan, 2020; Neborsky et al., 2020; Nwanmereni, 2020) and raise crucial questions about the function and form of social capital in the field of education. Some researchers regard online social capital as a supplement to offline social capital, while others consider it as independent of each other or without giving added value to the latter (Bapna et al., 2017; Filiposka et al., 2017; Kent et al., 2019). An offline student's social capital is positively linked to online interaction with other people. In other words, the higher offline social capital is, the more positive the person's interaction with other users of digital platforms is (Kent et al., 2019).

The present study examines the social capital of Greek university students in the period of the COVID-19 pandemic and the subsequent restrictive measures. In the Greek education system, the restrictive measures began with the closure of a school unit for 14 days on 27/2/2020 (Government Gazette Β΄ 647 / 27.02.2020). They continued with the imposition of the measure of temporary ban on the operation of a university unit at the University of Crete in 5/3/2020 (Government Gazette Β΄708 / 05-03-2020) and were completed with the imposition of the measure of temporary prohibition of operation of all kinds of educational structures on 10/3/2020 (Government Gazette Β΄ 783 / 10.03.2020). The courses at the University Institutions of Greece were completed through distance learning and for the laboratory courses, for which lifelong learning was required, protection measures for the pandemic were observed (Government Gazette BD 1935 / 20.05.2020).

3. Method

3.1 Sample

The research followed the quantitative design of social capital research and the sample of our research effort consists of 250 university students (102 men (39.23%) and 158 women (60.77%). The year of study and the educational level of students' fathers and mothers are analyzed in Table 1.

Table 1: The year of study and the educational level of students' parents

Year of studies	Frequency	Percent
1	25	9,6
2	53	20,4
3	86	33,1
4	66	25,4
5	30	11,5
Fathers' education level		
Elementary	40	15,4
Gymnasium	38	14,6
Lyceum	86	33,1
University	96	36,9
Mothers' education level		
Elementary	35	13,5
Gymnasium	36	13,8
Lyceum	106	40,8
University	83	31,9

3.2 Research tool

A number of research tools and approaches to measure social capital are highlighted in the international literature. Various qualitative and quantitative methods are used on an individual and collective level, depending on the purpose of the research, but the ambiguity and abundance of definitions do not effectively contribute to the formation of the variables of a research. The research tool was a questionnaire, structured to serve the present quantitative research and to meet the terms of the "representative content" validity, based on the international literature on social capital (Bourdieu, 1986; 2001; Bourdieu & Wacquant 1992; Bullen & Onyx, 2005. Coleman, 1988). At the same time, dimensions of social capital were taken into account, such as participation in local community, proactivity in a social context, feelings of trust and safety, neighborhood connections, family and friends connections, tolerance of diversity, value of life, work connections (Bullen & Onyx, 2005: 15), participation, social engagement & commitment, control and self-efficacy, perception of community level structures or characteristics, social interaction, social networks and social support, trust, reciprocity, social cohesion (Ruston & Akinrodoye, 2002: 4- 8). Also, before its application, the questionnaire had been evaluated by ten social scientists, who evaluated the questions of the scale in terms of the relevance of their content to social capital based on a five-point scale (where 1 = unrelated and 5 = absolutely relevant). From the analysis of the results of the scale evaluation (with the questions = 4.6) by the expert scientists, the validity and the adequacy of the content of the questionnaire ("presumable validity") was revealed. Also, the split-half reliability for the questionnaire was 0.71 and the internal consistency reliability factor was 0.75.

Based on the above, a questionnaire of two parts was formed. The first part had 10 questions covering the research of the social capital dimensions of university students examining their participation in the community, friendships, and student networks, developing initiatives and trust. The second part included questions about the

investigation of individual issues related to the social capital of bonding and bridging, as well as their interpersonal adjustment. Each question of the first part was rated on a five point scale (Likert scale), about the participants' agreement, ranging from: Strongly Disagree (coded 1), Disagree (coded 2), Undecided (coded 3), Agree (coded 4), Strongly Agree (coded 5). The second part was rated on a Dichotomous Scale: No (coded 1) and Yes (coded 2).

3.3 Research procedure

The "snowball" sampling method was used to collect the data. This method is used to collect research data when it is difficult to approach research subjects (Dusek et al., 2015). Due to the pandemic-related social distancing, the conditions for approaching the participants of our research were rather difficult. The survey was conducted in two phases: a) In the first place, students who attended the participating university and had a social media account completed the questionnaire. They wished to distribute the survey questionnaire and were selected to promote it on their social networks. b) The questionnaires were shared through social media to university students who had an active social media account, based on two criteria: a) to be active university students and b) their year of study. 296 questionnaires were collected, of which 260 were valid.

At the same time, prior to conducting this research, a pilot survey had been carried out among 30 university students in Greece. Having processed the protocols, the degree of discretion was found, and some questions were modified, as they were difficult to understand. At the same time, the content of the questions was enriched, when necessary. Research limitations included the use of the «snowball» method, which limited the possibilities of generalizing research results; yet, the findings are evidence of a general social phenomenon (Miles & Huberman (1984) related to the use of the Internet, as it excludes those who are not active users or do not have a social media account.

4. Findings

Factor analysis was conducted in 10 questions of the first part of the questionnaire. The method of main components and the orthogonal rotation of axes were used. The eigenvalues and a diagram of factors were used for the determination of the number of factors with factor loadings which are bigger than 0.40. The size of the sample is at least forty times the sum of the questions of the questionnaire and the KMO (0.86) and Bartlett's sign (<0.01) showed that the data was suitable for factorial analysis and the analysis in components make sense. By using the factor analysis for the questions and based on the diagram of factors, a solution of four factors was adopted (Table 2).

Table 2: Factors of social capital

	1	2	3	4
I am more interested in politics now	0.813			
I now have a better understanding of the social and political environment	0.673			
I participate more actively in organizations, unions, voluntary initiatives, etc.	0.673			
I show more tolerance, respect and trust in other people.		0.771		
I think more critically, and I have changed my mind on issues that I took for granted		0.733		
I have the feeling that I belong to a community and that I am a member of a team			0.497	
I have made new friends through the university, with whom I will keep in touch even after I finish my studies.			0.816	
I became more social, making it easier to make friends			0.694	
There is no point in referring to employees in writing				0.774
There is tension between the various groups at the University (between teachers and students, party organizations, students, etc.				0.713

Note: (1) Participation in community and proactivity in a social context, (2) Feelings of trust, (3) Feelings of belonging, (4) Negative climate in academic place.

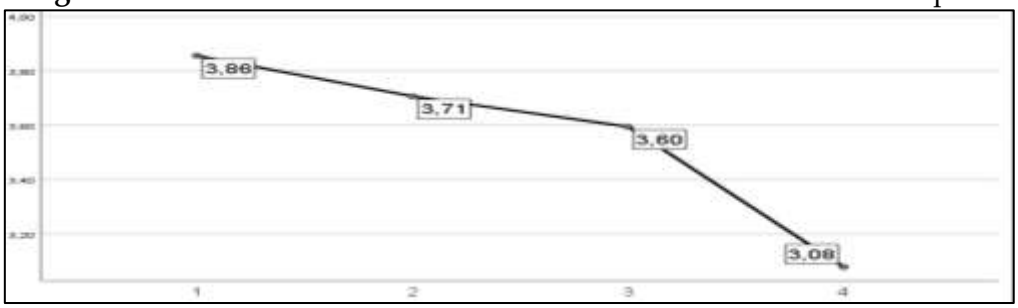
The four factors explain 60.834% of variance. More specifically, the following factors were selected: (a) *Participation in community and proactivity in a social context*, (b) *Feelings of trust*, (c) *Feelings of belonging*, and (d) *Negative climate in academic place*. The first factor, *Participation in community and proactivity in a social context*, refers to interest in politics, understanding of the socio-political environment and voluntary action. It interprets 17.433% of variance. It includes three questions (Table 2). The indicator of internal consistency of Cronbach's alpha was 0.816. The second factor, *Feelings of trust and tolerance*, refers to feelings of trust and tolerance towards individuals and social situations. It interprets 15.703% of variance. It includes two questions (Table 2). The indicator of internal consistency of Cronbach's alpha was 0.734. The third factor, *Feelings of belonging*, refers to the feelings of "belonging" to a social group. It interprets 15.577% of variance. It includes three questions (table 2). The indicator of internal consistency of Cronbach's alpha was 0.692. The fourth factor, *Negative climate in academic place*, refers to the problems of receiving services from the University and the tensions that can be created in the academic context. It interprets 12.121% of variance. It includes two questions (Table 3). The indicator of internal consistency of Cronbach's alpha was 0.616.

Table 3: Mean, median and percentiles of social capital factors

		Participation in community and proactivity in a social context	Feelings of trust	Feelings of belonging	Negative climate in academic place
Mean		3.08	3.71	3.86	3.60
Median		3.00	3	4	3
Std. Deviation		1.01	0.72	.80	.79
Percentiles	25	2.33	3.33	3.50	3.00
	50	3.00	3.66	4.00	3.50
	75	3.66	4.25	4.50	4.00

Based on Table 3, we can conclude that: a) students in relation to participation in community and proactivity in a social context appear to be indecisive, while at least 25 tend to be negative and b) in relation to feelings of trust, feelings of belonging, negative climate in academic place, students tend to agree on them. Means were examined in relation to whether there were differences between them. In order for means to be compared, a multivariate analysis of variance with repeated measures was used; this criterion was found statistically important: Hotelling's Trace, $F(3.515) = 91.363$, $p < 0.001$, $\eta 2 = 0.41$. The means of four factors are presented in ascending numerical order in Figure 1. The university students hold that negative climate in academic place and views of trust and belonging have been influenced more than participation in community and proactivity in a social context.

Figure 1: Hierarchical classification of the means of factors of social capital



Note: (1) Participation in community and proactivity in a social context, (2) Feelings of trust, (3) Feelings of belonging, (4) Negative climate in academic place.

To better compare students' social capital and form certain profiles, the answers were grouped based on four factors of university students' social capital. The analysis of "clusters" helped build two groups. The observation of clusters centers that derived from the analysis of "clusters" indicated that both "clusters" shared the following characteristics (Table 4): the first "cluster" (Group 1) was characterized by a high social capital, as they reported that university students feel confident and that they "belong" to the academic community, while tending to be positive about their participation in the community and actions in the social context. They also tend to approach more positively the climate of the academic community. On the contrary, the second "cluster" (Group 2) was characterized by a lower social capital, as they reported in a low degree that they feel confident and that they "belong" to the academic community, while they tend to be negative in their participation in the community and actions in the social context. They also tend to approach the academic community's climate with negative emotions. 234 university students were registered in the first group and 286 of their counterparts were registered in the second one.

Table 4: Clusters centers

	Cluster	
	1	**2**
Participation in community and proactivity in a social context	3.87	2.44
Feelings of trust	4.07	3.42
Feelings of belonging	4.32	3.48
Negative climate in academic place	2.58	3.74

1=Too litle …….. 5=Too much *Team 1: 234 Students, Team 2: 286 Students

The difference in the social capital of university students also determines the relationship of individuals with the social context, which has an impact on their socialization. University students with high social capital believe more than university students with low social capital that: a) their social interaction increased, b) the gap between the various social groups decreased, c) their participation in social issues increased, and d) their social isolation decreased. At the same time, the two groups do not seem to differ regarding their interest in cognitive issues related to science and the sense of personal identity.

Table 5: Interpersonal and intrapersonal adjustment

		No	**Yes**	**p**
More interpersonal interaction	HSC	17.9%	82.1%	<0.05
	LSC	28.8%	71.2%	
Reduction of isolation	HSC	41.6%	58.4%	<0.05
	LSC	51.1%	48.9%	
Greater involvement in social issues	HSC	32.9%	67.1%	<0.05
	LSC	44.1%	55.9%	
Stronger sense of personal identity	HSC	44.7%	55.3%	>0.05
	LSC	46.7%	53.3%	
Reducing the gap between the various social groups	HSC	49.3%	50.7%	<0.05
	LSC	62.1%	37.9%	
More interest in cognitive issues related to science	HSC	37.9%	62.1%	>0.05
	LSC	36.0%	64.0%	

5. Discussion – Conclusions

Research on social capital has increased in recent years and it is expected to generate even more interest under the conditions of "imposed" confinement and people's social distancing during the outbreak of the COVID-19 pandemic. Social capital is a key factor in the development of social fabric, social cohesion, but also in achieving positive results in education and other institutions of social life (Algan et al., 2013; Backhaus et al., 2020; Forsyth & Adams, 2004; Fukuyama, 2001; Kawachi et al. 1997; Koutras et al., 2020; Yoon et al., 2017). Structural elements of globalization (Hall 2003) intensify both the dimensions and consequences of social capital (Bourdieu, 1986. 2001; Bourdieu & Wacquant. 1992; Bullen & Onyx, 1998; Coleman, 1988; Putnam, 2000) in the new social reality, whose footprint is more than ever digital, while also challenged, and the question is whether they are different. The purpose of this work was to explore university students' social capital during the COVID-19 pandemic.

The research findings reveal that students, during the pandemic period, tend to be more associated with the academic community, developing feelings of trust and "belonging" in association with their participation in politics and their involvement in voluntary activities. At the same time, university students with high social capital, in contrast to university students with low social capital, are characterized by a high degree of sociability and active participation in various social organizations as well as by a high degree of social relations indicative of developing and participating in friendly networks. They better understand their social environment and have a high sense of belonging, while showing confidence and tolerance for diversity. For students, a high offline social capital is positively linked to online interaction with other people (Kent et al., 2019). All of the above make the academic environment more favorable for students with high social capital for their proper socialization and social inclusion compared with students with low social capital, as social capital has positive effects on social cohesion and greater individual participation in their social interaction and their relationships in the academic community (Algan et al., 2013; Koutra et al., 2020; Mato & Tsukasaki, 2019; Peng, 2019). In addition, university socialization, during which social and friendly relations are strengthened, provides high opportunities for scientific-professional careers and the aggregation of new social capital (Lampiri- Dimaki 2002: 105).

The difference in the acquisition of social capital, according to the research findings, does not seem to differentiate students' interest in science-related cognitive issues. This finding is inconsistent with several studies revealing that high social capital supports the increase in students' academic performance and cognitive function (Almeida et al., 2019; Peng, 2019; Mishra, 2020), because these individuals can take advantage of the information and support they receive through the powerful social networks they belong to (Almeida et al., 2019). The above finding may be due to the ineffective use of ICT in teaching during the pandemic. During the period of confinement, ICT prevailed, and most traditional learning and social interactions were revised by digital technology. Many educational organizations essentially had to transfer teaching and learning from the traditional classroom to the digital space of the Internet, forming a new virtual community. Several difficulties arose and many criticized the way teaching was implemented, both for students' financial burden (Demuyakor, 2020) and for the management of online teaching by teachers and institutions (education policy, universities, educational organizations) (Abbasi at al., 2020). While, at the same time, remote learning was separated, as was most often the case, from online learning, because there was no proper teacher training, there had been no necessary preparation for online teaching, due to the critical and urgent social reality (Hodges et al., 2020). It is noteworthy that the preference of university students for lifelong learning has been strengthened, without overlooking the advantages of online learning. (Abbasi at al., 2020).

In conclusion, in the spatiotemporal context of a society affected by the COVID-19 pandemic, it has been found that high social capital can create the proper conditions for positive social relations and student interactions and for the development of social trust, which is a prerequisite for cooperation, productive action and fellowship. A crucial correlation for further research is the one between social capital and cognitive

development during the pandemic. At the same time, the effects of students' social capital on the pandemic period underscore the importance of reinforcing social, friendly networks and social interaction to develop initiatives and social trust. The new social condition created during the pandemic redefines and prioritizes new goals in the context of the social conditions that are formed in the dynamically transformed social reality. Of course, at a time (in a state of 'liquidity') of social interdependence extending from the local to the global environment, in which everyday life is reconstructed under the negotiations between social subjects, social capital is an important variable that must be evaluated in the design of education policies. The emergence of the principles of trust, mutual respect and reciprocity can delineate the scope of meaning for a more effective learning and social integration of individuals.

Conflict of interest

Panagiotis Giavrimis and Souzanna-Maria Nikolaou declare that they have no conflict of interest.

About the Authors

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