

ORIGINAL PAPER  
ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ

**Social capital and patient satisfaction  
with cancer care**  
**A cross-sectional study in Greece**

**OBJECTIVE** Patient satisfaction has emerged as a powerful determinant and outcome of health care quality. Patient satisfaction is influenced by their socio-demographic characteristics and their social environment. The objective of this study was to examine the associations between individual level self-reported social capital and patient satisfaction with cancer care. **METHOD** The study design was cross-sectional. Over 10 consecutive weeks in 2007, 84 in-patients in an oncology department met the inclusion criteria, of whom 52 agreed to participate (62%). They completed, by interview, two questionnaires: The *Social Capital Questionnaire* (SCQ) and the *Comprehensive Assessment of Satisfaction with Care* (CASC). Correlational and simple and multiple linear regression analyses (including sex, age and education) were performed among social capital factors (participation in the community, feelings of safety, value of life and social agency, tolerance of diversity) and 11 dimensions of cancer care (medical, nursing, administrative). **RESULTS** Patient satisfaction rating on a 10-point scale had the highest correlation coefficients with the total social capital score ( $r=0.570$ ,  $p<0.001$ ) and with value of life and social agency ( $r=0.532$ ,  $p<0.001$ ). In multivariate analyses, the majority of patient satisfaction subscales were related to the total social capital score and to the factor value of life and social agency. Feelings of safety and tolerance of diversity were both correlated with some dimensions of patient satisfaction. Community participation was not related to patient satisfaction. The dimensions of care associated to a greater degree with social capital were those for which patients believe they do not have enough knowledge or experience to make a judgment on (e.g., doctors' technical skills). **CONCLUSIONS** The results suggest that the social capital of patients is associated with their satisfaction with health care. When individual-level social capital or some of its subscales increase, so does the level of patient satisfaction with certain aspects of cancer care. Patients may show a social predisposition when evaluating health care for reasons unrelated to the actual care received. These results are in agreement with bibliographic documentation of the influence of social capital on health outcomes. The inclusion of social capital will provide more accurate evaluation in patient satisfaction surveys.

Although the term "patient satisfaction" is widely used, only a few studies make a specific definition or are based on a theoretical model for the analysis and interpretation of the results. In general, patient satisfaction means the extent to which the experiences of patients meet their expectations of health care, and is based on evaluation of the care process and its outcome.<sup>1</sup> Carr-Hill<sup>2</sup> states that satisfaction is a multi-dimensional phenomenon which is defined by the expectations of patients and by their

previous and future experiences and their general lifestyle. Papanikolaou supports this concept, substantiating the idea that satisfaction is "...a reaction to stimuli that patients receive just before, during and after their hospital stay ...".<sup>3</sup> In other words, satisfaction is a complex process determined by a plethora of socio-psychological factors.<sup>4</sup>

Many studies report that patient satisfaction is influenced by demographic factors, such as the age, education and ethnicity of the patients.<sup>5-8</sup> In addition, the trust de-

ARCHIVES OF HELLENIC MEDICINE 2012, 29(1):91-99  
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2012, 29(1):91-99

G. Kritsotakis,<sup>1</sup>  
A.D. Koutis,<sup>2</sup>  
A.K. Alegakis,<sup>3</sup>  
S. Koukouli,<sup>4</sup>  
A.E. Philalithis<sup>2</sup>

<sup>1</sup>Department of Nursing, Technological and Educational Institute of Crete

<sup>2</sup>Department of Social Medicine, Faculty of Medicine, University of Crete

<sup>3</sup>Faculty of Medicine, University of Crete

<sup>4</sup>Department of Social Work, Technological and Educational Institute of Crete, Greece

Συσχέτιση του κοινωνικού κεφαλαίου με την ικανοποίηση των ογκολογικών ασθενών από τη νοσηλεία τους

Περίληψη στο τέλος του άρθρου

**Key words**

Cancer care  
Greece  
Oncology  
Patient satisfaction  
Social capital

Submitted 19.7.2011

Accepted 1.8.2011

veloped between healthcare professionals and patients is documented to be a determinant of patient satisfaction.<sup>9,10</sup> Individuals with a supportive social environment adjust better to the effects of the illness and when evaluating the health services they tend to give a higher ranking.<sup>11,12</sup> This leads to an interesting question: Do patients judge their encounters with the health care system subjectively?

The answer to this question is both positive, because individual expectations are independent of those of the society as a whole, and negative, as individual expectations are formed, to a certain degree, by the social framework in which people function. Subjectivity does not exclude the creation of an "aggregate of perceptions"<sup>13</sup> by which individuals with, e.g. a higher level of education tend to have higher expectations, which are not met, and they are therefore less satisfied with their care, while older people, possibly with a corresponding mechanism, appear to be more satisfied.

Although patient satisfaction is influenced by socio-demographic factors, to our knowledge, no study has been conducted to examine whether individual level social capital is associated with patient satisfaction with care. Patient satisfaction is shaped in a particular social framework; therefore it may be influenced by social capital and the way people operate in different social structures.

There have been many different conceptualizations of social capital.<sup>13</sup> Typically, it constitutes an expression of social contacts, trust and reciprocity, social participation, and the ability to access vital information.<sup>14</sup> It has both structural and cognitive components.<sup>15</sup> Structural social capital refers to what people do (e.g. participation), while cognitive social capital represents what people think or feel (e.g. trust).

Perry et al<sup>16</sup> examined whether evaluation of the health system is influenced by social capital in a sample of 1,216 low income individuals in the USA. They concluded that certain parameters, such as social contacts, but not participation, influence considerably the satisfaction of the general population, irrespective of confounding economic factors. Lindstrom and Axen<sup>17</sup> investigated to what extent low levels of two specific variables of social capital –social participation and trust– are related to patient dissatisfaction in primary health care. A low level of trust was associated with weaknesses of the medical staff in responding to the needs of patients and providing necessary information about the medical examinations and treatment.

The main aim of this study was to examine the association of individual-level social capital with patient

satisfaction ratings in the oncology setting. The research hypothesis was that social capital is associated with patient satisfaction in cancer care.

## MATERIAL AND METHOD

### Setting

The study took place in one medical oncology department in Athens, Greece. It was considered that the conduct of the study in more than one department would undermine the interpretability and reliability of the results because of the effect of differences in the working culture and other work related characteristics that may affect patient satisfaction, such as burnout among nurses and doctors, the nurse-patient ratio, the nurse-doctor ratio etc.<sup>18–21</sup>

### Participants

Every patient who was admitted to the medical oncology department over a period of 10 consecutive weeks in 2007 was invited to participate in the study at the time of their first hospitalization. The enrolment criteria for the study were: Age of 18 to 79 years, no history of psychiatric illness, ability to communicate, and to understand and speak Greek, and hospital stay of at least 2 nights. Of the 84 patients who met the criteria, 52 (62%) agreed to participate. Data on the health status and socio-demographic characteristics of the participants were retrieved from the medical and nursing records and are presented in table 1.

**Table 1.** Socio-demographic and medical characteristics of the study participants (n=52).

Gender	Male	29 (56.0%)
	Female	23 (44.0%)
Age (years)	Mean range	61.10
	SD	36–79
		10.05
Marital status	Married	38 (73.0%)
	Unmarried	1 (2.0%)
	Widowed	7 (13.0%)
	Unspecified	6 (11.5%)
Education	Elementary	16 (31.0%)
	Secondary	23 (44.0%)
	Higher	13 (25.0%)
Cancer	Lung	21 (40.5%)
	Gastrointestinal	18 (34.5%)
	Cervical	6 (11.5%)
	Breast	4 (7.5%)
	Other	3 (6.0%)

Note: Unspecified marital status was not recorded in the patients' nursing file

## Ethical considerations

Approval for the study was given by the "Evangelismos" Hospital Ethics Committee and informed consent was obtained from each participant prior to or at the time of enrollment into the study. Participants were informed about the study and were reassured that the discussion was confidential. It was clearly explained to them that they could discontinue the interview and withdraw from the study at any time without giving any explanation. When patients were unable to read the informed consent, the interviewer read it to them before they signed it.

## Data collection tools

Two research instruments were administered: The Social Capital Questionnaire (SCQ)<sup>22</sup> and the Comprehensive Assessment of Satisfaction with Care (CASC).<sup>23–25</sup> Both questionnaires have been psychometrically evaluated in Greek population samples.<sup>26–28</sup>

## Social Capital Questionnaire

The Greek version of SCQ consists of 36 questions in six domains: Participation in the community, feelings of safety, family/friends connections, value of life and social agency, tolerance of diversity, and work connections.<sup>27</sup> A higher score on a 4-point Likert scale indicates higher social capital.

Although SCQ is a valid and reliable tool for the measurement of individual-level social capital in Greece,<sup>27,28</sup> the process of hospitalization directly affects certain aspects of the everyday life of the individual and does not allow reliable documentation of the normal situation. As the SCQ has not been psychometrically tested in cancer patients, in order to explore possible variations of the scale among the study patients, compared to the general population, internal reliability tests (Cronbach's  $\alpha$ ) were conducted for 31 of the 36 questions of the scale, with the exclusion of the 5 questions relating to work (work connections factor, 4 questions; value of life and social agency, 1 question). The work connections item was excluded as most of the patients were not working at the time of the assessment. Cronbach's  $\alpha$  coefficient was 0.808 and could be improved by deleting 4 questions such as: "Did you visit a neighbour last week?" in the participation in the community subscale. Two of the deleted questions formed the subscale family/friends connections. Thus, the final analyses included 27 questions in the following subscales: Participation in the community, feelings of safety, value of life and social agency, and tolerance of diversity. The questions which were removed were not sensitive in describing the daily life of patients as affected by the disease and the process of hospitalization. All reliability analyses for this study are reported in the results section.

## Comprehensive assessment of satisfaction with care

Comprehensive assessment of satisfaction with care (CASC) comprises 60 questions on a 5-point Likert scale (1: strongly disagree to 5: strongly agree) that evaluates both the in-patient and the out-patient dimensions of cancer care, i.e. medical, nursing and administrative.<sup>26</sup> A higher score reveals better satisfaction. This analysis included the subscales related to inpatient care:

*Doctors:* Total rating and subscales (doctors' technical skills, doctors' interpersonal skills, doctors' information, doctors' availability)

*Nurses:* Total rating and subscales (nurses' technical skills, nurses' interpersonal skills, nurses' communication skills)

Administrative aspects of care (including waiting times, cleanliness) and general satisfaction (recommendation of the hospital).

The mean score of the patient satisfaction questionnaire and a rating of the overall hospital experience on a 10-point scale (higher rating is indicative of higher patient satisfaction) were also included.

The mean score of the patient satisfaction questionnaire and a rating of the overall hospital experience on a 10-point scale (higher rating is indicative of higher patient satisfaction) were also included.

## Design and data collection

We chose to have the questionnaires completed by the patients in the hospital, and not after their discharge in their homes, for two reasons: Firstly, we needed to confirm that the questionnaires were answered by the patients themselves, and not by their relatives. Secondly, the timing of the assessment affects the rating of satisfaction.<sup>29,30</sup> During the pilot study, questionnaires were not returned within the expected time, and this raised issues of data reliability.<sup>26</sup> In this study, the 52 patients completed both questionnaires in an interview-assisted procedure, conducted by the first author, in a private office or privately in their rooms. Although use of the interview technique raises issues of influence of participant responses due to social desirability bias, it has been shown that patients' answers are similar irrespective of the modality of administration.<sup>31</sup> The questionnaires were completed on the last day or the day before patient discharge. In every case, the interview was performed between the 3rd and the 5th day of hospitalization, because length of stay may affect patient satisfaction.<sup>32</sup>

Each interview for the completion of the questionnaire of satisfaction lasted 20–45 minutes, apart from 3 that lasted for 120 minutes. The interview time for SCQ was about 20 minutes.

## Statistical methods

Statistical Package for Social Sciences (SPSS), v.15.0 (SPSS, Chicago, IL, USA) was used to provide descriptive statistics for the sample, including means, standard deviations (SD), and ranges for each of the study variables. Pearson  $r$  correlation coefficients were used to test the associations between social capital and patient satisfaction.  $P < 0.05$  was considered statistically significant.

Linear regression models were fitted to estimate the associations between individual level social capital as the independent variable and patient satisfaction measured by the mean score for the entire patient satisfaction questionnaire and the score of the different subscales as the dependent variable. For both questionnaires, the score for the subscales emerged by adding the scores

of the questions that best define each subscale in the Greek sample, apart from the patient satisfaction mean score. Models were adjusted *a priori* for gender, age (in years) and education (up to the end of high school vs holding a university degree).

### Missing values

Missing values were up to 15.4% for some questions in the patient satisfaction questionnaire. The SCQ scale had only one missing value. In the analysis, all missing data, apart from the questions on information on admission and costs, were imputed: Missing values were replaced by the mean of the valid answers when at least half the items of each scale were answered. Missing data on admission and costs were replaced by the mean of the valid answers of the administrative aspects of care.

## RESULTS

### Reliability of the scales

Cronbach's  $\alpha$  coefficient reached 0.83 for the SCQ in this sample. Cronbach's  $\alpha$  for the factor value of life and social agency was 0.66 after removing the questions that were psychometrically undermining the scale (10 questions instead of the original 12) and for the factor participation in the community was 0.64 (11 questions instead of the original 12). Tolerance of diversity had a value of 0.67 and feelings of safety a value of 0.62. The recommended minimum Cronbach's  $\alpha$  value is 0.70,<sup>33</sup> but coefficients over 0.60 are acceptable.<sup>34</sup>

The reliability of all patient satisfaction scales was over 0.70.<sup>26</sup>

### Correlations between social capital and patient satisfaction

All correlations of social capital with patient satisfaction are presented in table 2. Patient satisfaction rating on a 10-point scale had the highest correlation coefficients with total social capital score ( $r=0.570$ ,  $p<0.001$ ) and with the item value of life and social agency ( $r=0.532$ ,  $p<0.001$ ). Participation in the community and feelings of safety showed weak but significant correlation with some patient satisfaction subscales ( $r=0.275-0.334$ ,  $p<0.05$ ). Tolerance of diversity was not related to patient satisfaction. Doctors' availability, nurses' interpersonal skills and nurses' communication skills were not found related to any social capital factors.

### Multiple linear regressions

Multiple linear regression analyses (adjusted for age,

gender and education) are presented in table 3. The 13 dependent patient satisfaction subscales were associated with the value of life and social agency. Doctors' availability was not found to be associated with individual-level social capital in this analysis. The factors feelings of safety and tolerance of diversity were associated with certain subscales of satisfaction. Participation in the community did not affect any parameter of patient satisfaction, but appeared to be associated only with the subscales for general satisfaction (recommendation of the hospital) ( $r^2=0.290$ ,  $\beta=0.44$ ,  $p=0.025$ ) and the patient satisfaction rating on the 10-point scale ( $r^2=0.239$ ,  $\beta=0.15$ ,  $p=0.013$ ).

The following patient satisfaction subscales were shown to be associated with all social capital factors apart from participation in the community:

- The mean score for the entire patient satisfaction questionnaire
- Doctors' total score
- Doctors' technical skills
- Administrative aspects of care
- Patient satisfaction rating on the 10-point scale.

The following subscales were associated with some social capital factors. These variables are total social capital, at the individual level, value of life and social agency, and either feelings of safety, or tolerance of diversity.

- Doctors' information
- Nurses' total score
- Nurses' communication skills.

The rating in the following subscales was not affected by social capital factors:

- Doctors' interpersonal skills
- Nurses' technical skills
- General satisfaction (recommendation of the hospital).

Ranking of doctors' availability was not influenced by any variable of social capital apart from value of life and social agency.

## DISCUSSION

This study presents the first, to our knowledge, association of individual level social capital with patient satisfaction in cancer care. We used the SCQ and the CASC Instruments. Both of these scales presented adequate psychometric properties in this study sample of in-patients in an oncology department.

We evaluated several social capital components, i.e. participation in the community, tolerance of diversity,

**Table 2.** Correlations between individual level social capital and patient satisfaction (n=52).

	Participation in the community	Feelings of safety	Tolerance of diversity	Value of life and social agency	Total social capital
Patient satisfaction rating on a ten-point scale	0.334 p=0.016	0.275 p=0.049	0.180 p=0.201	0.532 p=0.000	0.570 p=0.000
Mean score for the entire patient satisfaction scale	0.090 p=0.526	0.236 p=0.092	0.100 p=0.480	0.363 p=0.009	0.343 p=0.013
Doctors' total rating	0.049 p=0.730	0.239 p=0.088	0.155 p=0.274	0.334 p=0.016	0.275 p=0.049
Doctors' technical skills	-0.013 p=0.926	0.304 p=0.029	0.237 p=0.091	0.364 p=0.009	0.341 p=0.013
Doctors' interpersonal skills	0.168 p=0.233	0.254 p=0.069	0.017 p=0.907	0.253 p=0.073	0.277 p=0.047
Doctors' availability	-0.142 p=0.314	-0.002 p=0.989	0.089 p=0.533	0.262 p=0.064	0.145 p=0.306
Doctors' information	0.103 p=0.465	0.194 p=0.169	0.184 p=0.192	0.332 p=0.017	0.333 p=0.016
Nurses' total rating	-0.021 p=0.881	0.196 p=0.163	0.010 p=0.941	0.293 p=0.037	0.240 p=0.087
Nurses' technical skills	-0.081 p=0.568	0.142 p=0.315	0.062 p=0.661	0.283 p=0.044	0.207 p=0.141
Nurses' communication skills	0.049 p=0.731	0.231 p=0.100	-0.063 p=0.657	0.263 p=0.062	0.249 p=0.076
Nurses' interpersonal skills	0.109 p=0.440	0.212 p=0.131	-0.064 p=0.650	0.223 p=0.115	0.205 p=0.145
Administrative aspects of care	0.327 p=0.018	0.146 p=0.302	0.089 p=0.533	0.221 p=0.119	0.323 p=0.019
General satisfaction (recommendation of the hospital)	0.109 p=0.442	0.254 p=0.069	0.190 p=0.177	0.398 p=0.004	0.368 p=0.007

Note: The correlations emerge by adding the scores of the questions that best define each factor in the Greek sample

feelings of safety, value of life and social agency. After adjustment for a range of possible confounders, our results confirmed our research hypothesis. When individual-level social capital or some of its factors increase, so does the level of patient satisfaction with some aspects of cancer care. Patient satisfaction, to the extent that the expectations of the patients are being met, is shaped in a specific social structure. Consequently, it is influenced by the way people function in this given structure. Social capital creates the conditions for the fulfillment of the expectations of patients from the healthcare services.

In all statistical analyses (tables 2, 3), some aspects of patient satisfaction were found to be associated with social capital variables, and predominantly with individual social capital and the value of life and social agency. All the significant correlations were positive.

Participation in the community was not shown to affect

patient satisfaction in the multivariate tests. It appeared to be related only to the subscale of general satisfaction (recommendation of the hospital) and the patient satisfaction rating on the 10-point scale.

Studies show that social capital factors exhibit a great diversity in their association with health outcomes and this is confirmed by our results. In two deprived neighborhoods in Sydney, Australia, only feelings of trust and reciprocity made significant contributions in explaining health variance among several social capital components.<sup>35</sup> Turell et al and Blakely et al showed that various different social capital measures were not associated with mortality in Australia and New Zealand respectively.<sup>36,37</sup> Although social capital has an established positive effect on health outcomes, it may influence attitudes and perceptions in a more straightforward way than more robust health indices.

To date there has been no documentation on whether

**Table 3.** Relationship between individual level social capital and patient satisfaction: Multiple linear regression analysis (n=52).

	Participation in the community (range 11–44)			Value of life and social agency (range 10–40)			Tolerance of diversity (range 2–8)			Feelings of safety (range 2–8)			Total social capital (range 27–108)							
	R <sup>2</sup>	b	(CI, LL - UL)	R <sup>2</sup>	b	(CI, LL - UL)	R <sup>2</sup>	b	(CI, LL - UL)	R <sup>2</sup>	b	(CI, LL - UL)	R <sup>2</sup>	b	(CI, LL - UL)					
Patient satisfaction rating on a 10-point scale	0.239	0.15	0.03	0.26	0.519	0.23	0.15	0.30	0.211	0.33	0.03	0.63	0.224	0.32	0.05	0.59	0.513	0.10	0.07	0.14
Mean score for the entire patient satisfaction scale	0.321	0.03	-0.02	0.07	0.503	0.07	0.04	0.10	0.358	0.11	0.00	0.23	0.391	0.13	0.03	0.23	0.473	0.03	0.01	0.04
Doctors' total rating	0.245	0.37	-0.52	1.26	0.423	1.26	0.62	1.90	0.308	2.38	0.21	4.55	0.320	2.33	0.37	4.29	0.387	0.51	0.20	0.82
Doctors' technical skills	0.051	-0.06	-0.20	0.41	0.261	0.41	0.18	0.64	0.150	0.89	0.14	1.63	0.185	0.93	0.26	1.59	0.188	0.15	0.05	0.26
Doctors' interpersonal skills	0.401	0.15	-0.14	0.45	0.460	0.30	0.07	0.53	0.402	0.41	-0.34	1.15	0.426	0.58	-0.08	1.25	0.475	0.14	0.04	0.25
Doctors' availability	0.207	0.06	-0.29	0.17	0.281	0.21	0.03	0.39	0.230	0.37	-0.20	0.94	0.214	0.22	-0.31	0.74	0.244	0.07	-0.02	0.15
Doctors' information	0.182	0.17	-0.10	0.44	0.313	0.35	0.14	0.55	0.233	0.72	0.05	1.40	0.220	0.60	-0.01	1.22	0.298	0.15	0.05	0.24
Nurses' total rating	0.348	0.03	-0.59	1.13	0.475	1.07	0.43	1.72	0.359	1.18	-1.00	3.36	0.411	2.16	0.26	4.06	0.437	0.42	0.11	0.72
Nurses' technical skills	0.229	0.01	-0.56	0.59	0.353	0.62	0.18	1.06	0.255	0.89	-0.55	2.32	0.290	1.25	-0.03	2.52	0.306	0.23	0.02	0.44
Nurses' communication skills	0.456	0.19	-0.12	0.50	0.554	0.39	0.16	0.62	0.443	0.26	-0.53	1.06	0.491	0.74	0.05	1.44	0.530	0.16	0.05	0.27
Nurses' interpersonal skills	0.333	0.10	-0.04	0.24	0.360	0.12	0.01	0.23	0.306	0.07	-0.30	0.44	0.344	0.27	-0.06	0.59	0.363	0.05	0.00	0.11
Administrative aspects of care	0.290	0.44	0.06	0.82	0.332	0.42	0.11	0.74	0.289	1.12	0.14	2.10	0.252	0.76	-0.15	1.68	0.376	0.24	0.10	0.38
General satisfaction (recommendation of the hospital)	0.128	0.11	-0.11	0.33	0.298	0.28	0.11	0.45	0.150	0.42	-0.14	0.97	0.169	0.45	-0.05	0.96	0.240	0.11	0.03	0.19

Note: Models adjusted for age (in years), gender, and education (up to the end of high school/holding a University degree)

and to what extent social capital changes with the presentation of neoplastic disease. It is most likely that the cognitive features of social capital (trust, reciprocity) are not influenced, or are less influenced, in contrast with its structural characteristics (participation). This is partially supported by the results of the interviews during the completion of the questionnaires in this study: It was revealed that structural characteristics of social capital, such as participation, are modified with the diagnosis of cancer. Specifically, those who participated in clubs, groups or organizations before the start of the disease, stopped or limited their participation after diagnosis. Among the oncology patients who participated in the survey, the variation of responses concerning this factor was limited, but so was the variation in the answers concerning the period of the last three years. Although a neutral effect of participation in the community on satisfaction was not definitely demonstrated by the present study, the neutral effect of participation on health indicators is a regular finding in the literature.<sup>16,17</sup>

Feelings of safety and tolerance of diversity appeared to have a marginal effect on satisfaction. It may be the case that the patients' evaluation of the health system is influenced by social factors seemingly unrelated to it, but this possibility needs further investigation.

The dimensions of care affected to a greater degree by social capital appear to be those for which patients believe they do not have enough knowledge or experience to make a judgment on. When the field of evaluation is beyond the patients' knowledge (e.g. doctors' technical skills), social predisposition determines to some extent their level of satisfaction. This may be a possible interpretation of why certain dimensions of satisfaction appeared to be influenced by social capital while others were not, and may explain the differences between the patients' evaluation of the medical and

the nursing staff. In the case of doctors, patients make an evaluation based on what they “feel”, while in the case of nurses, with whom they are more familiar, on what they consider they “know”.

Another possible mechanism accounting for this positive correlation is that the relative extroversion of individuals with high social capital will reflect on the behaviour of the staff, influencing factors that have been related to patient satisfaction, such as communication between patients and health care staff. Optimum communication may be created and more adequate information given as a positive response of the healthcare staff to the individuals who trust them and/or show better understanding of the difficulties of care. High social capital at the individual level is likely to create the certainty that the health staff, acting in the best interests of the patients, provide the best possible care.

### Limitations

The findings from this study have various important implications but the study was not without limitations. The most important of these is that we cannot exclude unmeasured confounding between social capital and other socio-economic factors that could not be controlled for in this sample. In addition, the study design was cross-sectional and did not allow for definitive conclusions on cause and causality, although the suggested effect of social capital on patient satisfaction is the most probable.

The relatively small sample and the consequent small variation in specific variables prevent the interpretation of some of the findings. We cannot know whether the non association of participation with patient satisfaction is real or is because a function of our inability to detect its influence due to the limited participatory variation in the patient sample. Consequently, the possible influence of structural characteristics of social capital on patient

satisfaction may be underestimated. In addition, we may not assume that error variance at the 0.60 reliability level is equivalent to error variance at the >0.70 for hypothesis testing, so the correlations between social capital factors and patient satisfaction should be interpreted with caution.

A further limitation is that the study was conducted in one department. This enhanced methodologically the reliability and interpretability of the results but makes it difficult to generalize the findings to all oncology patients or the general population. The variation in the demographic factors of the sample was limited and we cannot know whether other groups (for example younger or unemployed individuals) are predisposed to a positive or negative assessment of the health system.

In conclusion, a significant finding of the present study is that the social capital of patients is related to their satisfaction with care. Patients may show a positive or negative predisposition to nursing and health care for reasons unrelated to the actual care received. The inclusion of social capital will provide more accurate evaluation in patient satisfaction surveys. Effective evaluation is essential, especially when providing information for health policy planning or comparing nurse staffing levels or care in areas with various stocks of social capital. Additionally, this study gives health professionals the insight needed to provide more individualized and client-specific care and meet patients' expectations. Nurses may include social capital in their assessment of patients' needs. When the social capital of cancer patients is not adequate to facilitate their adjustment to the process of illness, nurses may be able to help them towards that end. This may be effected, for example, by advocating their participation in cancer patient support groups. A number of issues have been identified that merit further research. During such research, it should not be forgotten that the health professionals themselves are actually part of their patients' social capital.

### ΠΕΡΙΛΗΨΗ

#### Συσχέτιση του κοινωνικού κεφαλαίου με την ικανοποίηση των ογκολογικών ασθενών από τη νοσηλεία τους

Γ. ΚΡΙΤΣΩΤΑΚΗΣ,<sup>1</sup> Α. ΚΟΥΤΗΣ,<sup>2</sup> Α. ΑΛΕΓΚΑΚΗΣ,<sup>3</sup> Σ. ΚΟΥΚΟΥΛΗ,<sup>4</sup> Τ. ΦΙΛΑΛΛΗΘΗΣ<sup>2</sup>

<sup>1</sup>Τμήμα Νοσηλευτικής, ΑΤΕΙ Κρήτης, Ηράκλειο, <sup>2</sup>Τομέας Κοινωνικής Ιατρικής, Τμήμα Ιατρικής,

Πανεπιστήμιο Κρήτης, Ηράκλειο, <sup>3</sup>Τμήμα Ιατρικής, Πανεπιστήμιο Κρήτης, Ηράκλειο,

<sup>4</sup>Τμήμα Κοινωνικής Εργασίας, ΑΤΕΙ Κρήτης, Ηράκλειο, Κρήτη

Αρχεία Ελληνικής Ιατρικής 2012, 29(1):91–99

**ΣΚΟΠΟΣ** Η διερεύνηση της συσχέτισης του κοινωνικού κεφαλαίου με την ικανοποίηση των ογκολογικών ασθενών από τη νοσηλεία τους. **ΥΛΙΚΟ-ΜΕΘΟΔΟΣ** Ογδόντα τέσσερις ασθενείς από μια παθολογική ογκολογική κλινική πλη-

ρούσαν τα κριτήρια εισαγωγής στη μελέτη, σε περίοδο 10 διαδοχικών εβδομάδων: Να είναι ηλικίας 18–79 ετών, να μην έχουν ψυχιατρικό ιστορικό, να μπορούν να επικοινωνήσουν (π.χ. να μην έχουν εκτενείς εγκεφαλικές μεταστάσεις), να είναι σε θέση να κατανοήσουν και να μιλήσουν Ελληνικά, να έχουν παραμείνει στο νοσοκομείο τουλάχιστον για 2 νύκτες. Οι ασθενείς συμπλήρωσαν ταυτόχρονα δύο ερωτηματολόγια: Την «Κλίμακα Ποσοτικής Εκτίμησης του Κοινωνικού Κεφαλαίου» και το ερωτηματολόγιο για τη «Συνολική Εκτίμηση της Ικανοποίησης από τη Νοσηλεία». Η συσχέτιση μεταξύ παραγόντων του κοινωνικού κεφαλαίου («συμμετοχή στην κοινότητα», «αισθήματα ασφάλειας», «κοινωνική συμπεριφορά και εκτίμηση της ζωής», καθώς και «ανοχή στη διαφορετικότητα») και 11 παραμέτρων ικανοποίησης των ασθενών (ιατρικών, νοσηλευτικών, διοικητικών) ελέγχθηκε με μονοπαραγοντική (simple) και πολυπαραγοντική (multiple) γραμμική παλινδρόμηση (linear regression). **ΑΠΟΤΕΛΕΣΜΑΤΑ** Ο «γενικός βαθμός ικανοποίησης σε 10βάθμια κλίμακα» εμφάνισε τους υψηλότερους συντελεστές συσχέτισης  $r$  με το σύνολο του κοινωνικού κεφαλαίου ( $r=0,570$ ,  $p<0,001$ ) και με την «κοινωνική συμπεριφορά και εκτίμηση της ζωής» ( $r=0,532$ ,  $p<0,001$ ). Η «ανοχή στη διαφορετικότητα» δεν σχετίστηκε με καμιά παράμετρο της ικανοποίησης. Στις πολυπαραγοντικές αναλύσεις (συμπεριλήφθηκαν οι δημογραφικές μεταβλητές φύλο, ηλικία, εκπαίδευση), οι πιο ισχυρές συσχετίσεις εμφανίζονται μεταξύ του συνόλου του κοινωνικού κεφαλαίου και των «γενικού βαθμού ικανοποίησης σε 10βάθμια κλίμακα» ( $r^2=0,513$ ,  $\beta=0,10$ ,  $p<0,001$ ), «κοινωνικές δεξιότητες ιατρικού προσωπικού» ( $r^2=0,475$ ,  $\beta=0,14$ ,  $p<0,001$ ). Από τους παράγοντες του κοινωνικού κεφαλαίου η «κοινωνική συμπεριφορά και εκτίμηση της ζωής» είχε τη μεγαλύτερη συσχέτιση με την ικανοποίηση, ενώ οι παράγοντες «ανοχή στη διαφορετικότητα» και «αισθήματα ασφάλειας» σχετίστηκαν με ορισμένες μόνο υποκλίμακες. Η «συμμετοχή στην κοινότητα» δεν σχετίστηκε με την ικανοποίηση. **ΣΥΜΠΕΡΑΣΜΑΤΑ** Τα αποτελέσματα επιβεβαιώνουν την ερευνητική υπόθεση ότι το κοινωνικό κεφάλαιο σχετίζεται με την ικανοποίηση των ασθενών. Όταν αυξάνονται οι δείκτες του κοινωνικού κεφαλαίου σε ατομικό επίπεδο, αυξάνεται και ο βαθμός ικανοποίησης από ορισμένες διαστάσεις της νοσηλείας. Τα αποτελέσματα είναι σε συμφωνία με την τρέχουσα βιβλιογραφία για διαφορετική επίδραση των παραγόντων του κοινωνικού κεφαλαίου σε δείκτες υγείας. Το κοινωνικό κεφάλαιο δημιουργεί μια προδιάθεση κατά την αξιολόγηση της νοσηλείας από τους ασθενείς, η οποία δεν σχετίζεται απαραίτητα με το επίπεδο της νοσηλείας. Η μέτρηση του κοινωνικού κεφαλαίου θα δίνει τη δυνατότητα για πιο ακριβείς αξιολογήσεις της ικανοποίησης των ασθενών από τη νοσηλεία τους σε ογκολογικά τμήματα.

**Λέξεις ευρητηρίου:** Ικανοποίηση ασθενών, Καρκίνος, Κοινωνικό κεφάλαιο, Ογκολογική φροντίδα

## References

- SHIKIAR R, RENTZ AM. Satisfaction with medication. An overview of conceptual, methodologic, and regulatory issues. *Value Health* 2004, 7:204–215
- CARR-HILL RA. The measurement of patient satisfaction. *J Public Health Med* 1992, 14:236–249
- PAPANIKOLAOU V. Health care quality and user's satisfaction. In: Kyriopoulos J, Lionis C, Souliotis K, Tsakos Y (eds) *Health care quality* (I poiotita stis ipiresies igias). 2nd ed. Themelio, Athens, 2006:261–278
- WAGNER D, BEAR M. Patient satisfaction with nursing care: A concept analysis within a nursing framework. *J Adv Nurs* 2009, 65:692–701
- SANDOVAL GA, LEVINTON C, BLACKSTIEN-HIRSCH P, BROWN AD. Selecting predictors of cancer patients' overall perceptions of the quality of care received. *Ann Oncol* 2006, 17:151–156
- QUINTANA JM, GONZÁLEZ N, BILBAO A, AIZPURU F, ESCOBAR A, ESTEBAN C ET AL. Predictors of patient satisfaction with hospital health care. *BMC Health Serv Res* 2006, 6:102
- LIU R, SO L, QUAN H. Chinese and white Canadian satisfaction and compliance with physicians. *BMC Fam Pract* 2007, 8:11
- MORET L, NGUYEN JM, VOLTEAU C, FALISSARD B, LOMBRAIL P, GASQUET I. Evidence of a non-linear influence of patient age on satisfaction with hospital care. *Int J Qual Health Care* 2007, 19:382–389
- BAKER R, MAINOUS AG 3rd, GRAY DP, LOVE MM. Exploration of the relationship between continuity, trust in regular doctors and patient satisfaction with consultations with family doctors. *Scand J Prim Health Care* 2003, 21:27–32
- BENKERT R, HOLLIE B, NORDSTROM CK, WICKSON B, BINS-EMERICK L. Trust, mistrust, racial identity and patient satisfaction in urban African American primary care patients of nurse practitioners. *J Nurs Scholarsh* 2009, 41:211–219
- DA COSTA D, CLARKE AE, DOBKIN PL, SENEAL JL, FORTIN PR, DANOFF DS ET AL. The relationship between health status, social support and satisfaction with medical care among patients with systemic lupus erythematosus. *Int J Qual Health Care* 1999, 11:201–207
- BARRY LC, LICHTMAN JH, SPERTUS JA, RUMSFELD JS, VACCARINO V, JONES PG ET AL. Patient satisfaction with treatment after acute myocardial infarction: Role of psychosocial factors. *Psychosom Med* 2007, 69:115–123
- KAWACHI I, SUBRAMANIAN SV, KIM D. Social capital and health: A decade of progress and beyond. In: Kawachi I, Subramanian SV, Kim D (eds) *Social capital and health*. Springer, New York, 2008:1–28
- KRITSOTAKIS G, GAMARNIKOW E. What is social capital and how



- does it relate to health? *Int J Nurs Stud* 2004, 41:43–50
15. KRITSOTAKIS G, MAIOVIS P, KOUTIS A, PHILALITHIS AE. Individual and contextual influences of social variables in health outcomes: The impact of social capital. *Arch Hellen Med* 2009, 26:523–535
  16. PERRY M, WILLIAMS RL, WALLERSTEIN N, WAITZKIN H. Social capital and health care experiences among low-income individuals. *Am J Public Health* 2008, 98:330–336
  17. LINDSTRÖM M, AXÉN E. Social capital, the miniaturization of community and assessment of patient satisfaction in primary healthcare: A population-based study. *Scand J Public Health* 2004, 32:243–249
  18. VAHEY DC, AIKEN LH, SLOANE DM, CLARKE SP, VARGAS D. Nurse burnout and patient satisfaction. *Med Care* 2004, 42(Suppl 2):II57–II66
  19. BRÉDART A, COENS C, AARONSON N, CHIE WC, EFFICACE F, CONROY T ET AL. Determinants of patient satisfaction in oncology settings from European and Asian countries: Preliminary results based on the EORTC IN-PATSAT32 questionnaire. *Eur J Cancer* 2007, 43:323–330
  20. HALBESLEBEN JR, RATHERT C. Linking physician burnout and patient outcomes: Exploring the dyadic relationship between physicians and patients. *Health Care Manage Rev* 2008, 33:29–39
  21. TERVO-HEIKKINEN T, KVIST T, PARTANEN P, VEHVILÄINEN-JULKUNEN K, AALTO P. Patient satisfaction as a positive nursing outcome. *J Nurs Care Qual* 2008, 23:58–65
  22. ONYX J, BULLEN P. Measuring social capital in five communities. *J Appl Behav Sci* 2000, 36:23–42
  23. BRÉDART A, RAZAVI D, DELVAUX N, GOODMAN V, FARVACQUES C, VAN HEER C. A comprehensive assessment of satisfaction with care for cancer patients. *Support Care Cancer* 1998, 6:518–523
  24. BRÉDART A, RAZAVI D, ROBERTSON C, DIDIER F, SCAFFIDI E, DE HAES JC. A comprehensive assessment of satisfaction with care: Preliminary psychometric analysis in an oncology institute in Italy. *Ann Oncol* 1999, 10:839–846
  25. BRÉDART A, RAZAVI D, ROBERTSON C, BATEL-COPEL L, LARSSON G, LICHOSIK D ET AL. A comprehensive assessment of satisfaction with care: Preliminary psychometric analysis in French, Polish, Swedish and Italian oncology patients. *Patient Educ Couns* 2001, 43:243–252
  26. KRITSOTAKIS G, KOUTIS AD, KOTSORI A, ALEXOPOULOS CG, PHILALITHIS AE. Measuring patient satisfaction in oncology units: Interview-based psychometric validation of the “Comprehensive Assessment of Satisfaction with Care” in Greece. *Eur J Cancer Care (Engl)* 2010, 19:45–52
  27. KRITSOTAKIS G, KOUTIS AD, ALEGAKIS AK, PHILALITHIS AE. Development of the Social Capital Questionnaire in Greece. *Res Nurs Health* 2008, 31:217–225
  28. KRITSOTAKIS G, ANTONIADOU E, KOUTRA K, KOUTIS A, PHILALITHIS A. Cognitive validation of the social capital questionnaire in Greece. *Nosileftiki* 2010, 49:274–285
  29. BRÉDART A, RAZAVI D, ROBERTSON C, BRIGNONE S, FONZO D, PETIT JY ET AL. Timing of patient satisfaction assessment: Effect on questionnaire acceptability, completeness of data, reliability and variability of scores. *Patient Educ Couns* 2002, 46:131–136
  30. STEVENS M, REININGA IH, BOSS NA, VAN HORN JR. Patient satisfaction at and after discharge. Effect of a time lag. *Patient Educ Couns* 2006, 60:241–245
  31. BRÉDART A, MIGNOT V, ROUSSEAU A, DOLBEAULT S, BEAULOYE N, ADAM V ET AL. Validation of the EORTC QLQ-SAT32 cancer inpatient satisfaction questionnaire by self- versus interview-assessment comparison. *Patient Educ Couns* 2004, 54:207–212
  32. NGUYEN THI PL, BRIANÇON S, EMPEREUR F, GUILLEMIN F. Factors determining inpatient satisfaction with care. *Soc Sci Med* 2002, 54:493–504
  33. NUNNALLY JC. *Psychometric theory*. 2nd ed. McGraw-Hill, New York, 1978
  34. BROWNELL P, DUNK AS. Task uncertainty and its interaction with budgetary participation and budget emphasis: Some methodological issues and empirical investigation. *Account Organ Soc* 1991, 6:693–703
  35. CHAVEZ R, KEMP L, HARRIS E. The social capital: Health relationship in two disadvantaged neighbourhoods. *J Health Serv Res Policy* 2004, 9(Suppl 2):29–34
  36. TURRELL G, KAVANAGH A, SUBRAMANIAN SV. Area variation in mortality in Tasmania (Australia): The contributions of socioeconomic disadvantage, social capital and geographic remoteness. *Health Place* 2006, 12:291–305
  37. BLAKELY T, ATKINSON J, IVORY V, COLLINGS S, WILTON J, HOWDEN-CHAPMAN P. No association of neighbourhood volunteerism with mortality in New Zealand: A national multilevel cohort study. *Int J Epidemiol* 2006, 35:981–989
- Corresponding author:*
- G. Kritsotakis, Department of Nursing, Technological Educational Institute of Crete, P.O. Box 1939, GR-710 04 Heraklion, Crete, Greece  
 e-mail: gkritis@staff.teicrete.gr