## RESEARCH ARTICLE

Exploring the factors influencing time and difficulty of tasks provided by family caregivers of patients with advanced cancer in Greece

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### Abstract

Introduction: 'Caregiver burden' is a term that describes the effects of the stressors associated with providing care to an ill family member. Aim: The aim of this study was to explore the effects of patient and caregiver demographic, clinical and psychosocial variables on the perceptions of families experiencing burden when caring for a patient suffering from advanced cancer in Greece.

Method and Material: Purposive sampling was adopted to study one hundred pairs of patients receiving palliative radiotherapy and their respective primary caregivers. Patients and caregivers were asked to complete a set of questionnaires. Univariate and multiple linear regression analyses were conducted to identify potential predictors of burden. Results: Of the 100 patients who participated in the study, 63% was male, while of the 100 caregivers, 76% was female. The mean age of patients and caregivers was 63.9±12.55 and 53.3.±12.55 respectively. Caregiving burden related to time consuming tasks was associated with patient's age (p=0.003), performance status (p=0.041), impact of cancer-related symptoms (p=0.002) and symptom interference with the function (p=0.017).The associations with caregiver's variables were family status (p=0.009), minor child (p=0.028), anxiety (p<0.001) and depression (p=0.003). In multiple regression analyses, caregiving burden related to time was significantly predicted by caregivers' anxiety, family status, minor child, as well as by patients' symptoms, in a model that explained 32% of the total variance. Caregiving burden related to perceived difficulty was also associated to both patient [performance status (p=0.012), impact of cancer-related symptoms (p=0.004), symptom interference with the function (p=0.001) and anxiety (p=0.016)] and caregiver variables [gender (p=0.045), family status (p=0.035), anxiety (p<0.001) and depression (p<0.001)]. In multiple regression analyses, caregiving burden related to perceived difficulty was significantly predicted by caregivers' depressed mood and anxiety, family status, minor child, as well as by patients' symptoms, in a model that explained 38% of the total variance.

Conclusions: The caregiving burden is related to several variables. Intervention strategies are needed to the vulnerable caregivers to help reduce burden, anxiety and depression associated with caregiving.

Keywords: Family caregiver, advanced cancer, caregiver burden, time consuming/difficult tasks, radiotherapy

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### Introduction

Research on informal caregivers tends to focus on the extent of tasks they undertake, describing the burden experienced by caregivers. A richer conceptualization includes comprising environmental factors, including patient level of dependency, which are subjectively experienced by caregivers.<sup>1</sup> Carers are likely to become more distressed and develop psychiatric morbidity as the illness advances and treatment becomes palliative.<sup>2</sup> Grunfeld's et al.,<sup>3</sup> findings indicated that, although patient's physical and emotional factors predicted caregiver distress, perceived burden is the strongest predisposing factor of caregiver anxiety and depression. Advanced cancer often requires intensive and short- or longterm palliative care,<sup>4</sup> which induces physical, psychological and social consequences not only for the patient,<sup>5</sup> but also for family members.<sup>6</sup> Given et al.,<sup>7</sup> in 2001 considered caregiver burden in advanced cancer as "resulting from an imbalance of care demands relative to caregivers' personal time, social roles, physical and emotional status, financial resources, and formal care resources given the other multiple roles they fulfil". Most researchers agree that there are two central dimensions, objective and subjective burdens, that comprise the family burden concept.<sup>8,9</sup> Objective burden can be defined as 'the time and effort required of one person to attend to the needs of another'.<sup>10</sup> Burden also includes time spent in caregiving, the kind of health and caregiving services, as well the financial expenses which can have implications on the "dependent" person's life.<sup>9,11</sup> Alternatively, subjective burden comprises an individual's beliefs, assumptions, and feelings with regard to the caregiver role and is defined as the distress experienced by the caregiver in dealing the objective stressors.<sup>8</sup> Caregivers have the responsibility not only for their patient but at the same time they have to face the demands of their job, of household and generally all family

commitments. All of them may lead to the neglect of caregivers' needs and to a poor health condition and vulnerability for illness.<sup>12</sup> Often caregiving burden may be associated with managing illness-related finances, assisting with household tasks, and providing patient transportation. Moreover caregivers reported that considerable time and effort is required to provide emotional support.<sup>13</sup>

Potential predictors of caregiver burden might demographic, clinical be patients' and psychosocial characteristics. These may include disease severity, number and extent of caregiving tasks, as well as the level of involvement in tasks.<sup>14</sup> caregiving Being female, older, unemployed, with low socioeconomic status are some of the characteristics which in conjunction with disease severity can contribute to caregiver's burden.15

In Greece, the caregivers' characteristics are somewhat similar with those in other western countries, but due to traditional norms, there are still strong family bonds.<sup>16</sup> Unfortunately, in Greece the literature about informal caregiving is very poor.<sup>16,17,18</sup> Therefore, the necessity for an improvement in comprehending the factors which affect the experience of caregiving burden in Greek family caregivers of patients with advanced cancer forces into an attempt to define the best ways of dealing with individual needs and consequently encourage family members in their duty as care providers.

#### Purpose

The present study aimed to indentify the effects of patient and caregiver demographic, clinical and psychological variables on the perceptions of family caregivers experiencing burden (time consuming tasks and difficulty of provided tasks) when caring for a patient suffering from advanced cancer in Greece.

# **Patients and Methods**

A prospective, purposive sampling approach was followed in this study. One hundred patients who diagnosed with advanced cancer (stage IV according to the medical record) and were receiving out-patient palliative radiotherapy conducted in the study. They nominated their primary family caregiver who provided the most, unpaid care for the patient. Eligible caregivers were required to be adults (>18 years of age), with no diagnosed psychiatric disorders, and with adequate knowledge of the Greek language.

Ethical approval for the study was obtained from the Ethics Committee at the School of Nursing, University of Athens, as well as the scientific boards for each hospital. The investigator provided patients with study information material to read and consider participation. Their family caregivers followed similar consent procedures. Data collection was conducted through interviews with all dyads during the patient's appointment at the clinic.

Data was collected by the completion of a specially design questionnaire which included sociodemographic variables for the patients and caregivers, as well as clinical variables for the patients. Patients completed two questionnaires (The Hospital Anxiety and Depression Scale-Greek version and the MD Anderson Symptom Inventory-Greek version), and caregivers completed two questionnaires too (The Oberst Caregiving Burden Scale-Time and Difficulty, and the Hospital Anxiety and Depression Scale-Greek version).

The Oberst Caregiving Burden Scale (OCBS) is a 15-item questionnaire that was used to assess caregiver perceptions of the difficulty of caregiving tasks (OCBS-D) and time required in caring for their ill family member (OCBS-T).<sup>13</sup> Such caring tasks including providing personal care and medical care, assisting with activities of daily

living, monitoring symptoms, managing patient's emotion and behaviours, dealing with finances, and coordinating and seeking health services. The difficulty of caregiving task measure was rated on a 5-point Likert scale from 1 (not difficult) to 5 (extremely difficult). Time spent on caregiving tasks was rated on a 5-point Likert scale from 1 (none) to 5 (a great amount of time). A total score is used and is the sum of 15 items. Higher scores indicate great task difficulty and more time spent on each task.<sup>19</sup> In this study, the Cronbach's alpha coefficient was 0.87 for OCBS-D and 0.83 for OCBS-T. According to current guidelines, two independent translators translated the OCBS into the Greek language and then another two independent translators translated it back into English. Then, these translations were matched.

Caregivers and patients were asked to complete The Hospital Anxiety and Depression Scale- Greek version (G-HADS). It is a selfassessment mood scale specifically designed for use in the hospital setting. <sup>20</sup> The HADS has been standardised, adapted and validated for use with Greek patients with cancer<sup>21</sup>. It is a brief selfreport 14-item scale designed to measure the two most common aspects of mood disorder (i.e. anxiety and depression) on a 0-3 verbal numerical scale. Two subscale scores can be yielded, one for depression (G-HADS-D) and one for anxiety (G-HADS-A). Cronbach's alphas in the present study were 0.77 for G-HADS-D and 0.86 for G-HADS-A.

Patients were asked to complete M. D. Anderson Symptom Inventory – Greek version (G-MDASI). The MDASI is a 15-item questionnaire that facilitates a brief assessment of the severity and impact of cancer-related symptoms<sup>22</sup>. Each symptom is rated on an 11-point scale (0-10) to indicate the presence and severity of the symptom with 0 meaning 'not present' and 10 meaning 'as bad as you can imagine' in the last 24 hours. It also includes 6 symptoms interference items that are rated based on the level of symptom interference with the function of a patient's life in the last 24 hours, and also measured on an 11-point scale (0='did not interfere' to 10='interfered completely'). The MDASI has been standardized and validated in a sample of Greek patients with advanced cancer (G-MDASI) as a useful measure of symptom distress and severity.<sup>23</sup> In this study, the Cronbach's alpha coefficient was 0.83 (severity and impact of cancer-related symptoms) and 0.85 (symptom interference with the function).

### Statistical analysis

Basic descriptive statistics were computed for the sociodemographic variables, as well as means, standard deviations and ranges for continuous variables and percentages for categorical data. The Kolmogorov-Smirnov test was utilised to examine normality of continuous and intervalscale variables. Univariate analyses were conducted through use of independent samples ttests, one-way analysis of variance (ANOVA) and Pearson's r correlation coefficients to explore the relationships between the outcome variable (OCBS total score) and predictor variables. All predictors that were significantly associated with the outcome variable in univariate analysis were included in a multiple linear regression model, using the stepwise method to arrive at the final model and determine a multivariate summary model of determinants of outcome variable. All assumptions of linear regression analysis (homoscedasticity, linearity, normality and independence of error terms, as well as multicollinearity of independent variables using the variance inflation factor (VIF) of Tolerance were examined. A p-value of <0.05 (two-sided) was used to denote statistical significance. All analyses were carried out using the statistical package SPSS v. 16 (Statistical Package for the Social Sciences, SPSS Inc., Chicago, Ill., USA).

#### Results

Descriptive statistics

One hundred and sixty patients included firstly in the study and their nominated primary family caregivers. Twenty-five patients were unable to identify a caregiver or were unable to participate in the study due to low performance status, while 35 caregivers refused to participate due to lack of interest, perceived psychological distress, or fear for patient strain. In final analyses were included only consenting patient-caregiver dyads. Thus, the final sample consisted of 100 dyads (62.5% of eligible patients and caregivers).

Patient and caregiver demographic characteristics and patient clinical characteristics are outlined in Table 1. The mean age of the patients was 63.9 years (SD=10.81, range 35-87) and the mean age of the caregivers was 53.3 years (SD=12.55, range 26-88). Of the 100 patients, the majority was male (63%) and of the 100 caregivers, the majority was female (76%). The typical caregiver was married, had high school education, lived in the same household as the patient, had care experience, was spouse, did not work or was retired and moved to and from the hospital by private car. Regarding patients' disease stage, all of the patients were diagnosed with stage IV cancer.

Means, standard deviations and range for OBCS, HAD and MDASI Symptoms and Interference are shown in Table 2.

#### Univariate analyses

Results indicated some statistically significant associations between OCBS-T and the categorical predictors. Unmarried caregivers (p<0.009), and those with minor child (p=0.028), mentioned more perceived time spent or difficulty with caregiving tasks, compared to their respective counterparts. Moreover, caregivers of patients with ECOG score 2 and 3 reported greater burden than those who cared for a patient with ECOG score 1 (p=0.041) (Table 3). Concerning the relationship between caregiver burden (OBCS-T) and caregivers' continuous/interval-scale

statistically significant moderate predictors, correlations were found between time required for caregiving tasks and age (r=-0.300; p=0.003), time required for caregiving tasks and anxiety (G-HADS-A, r=-0.386; p<0.001), as well as time required for caregiving tasks and depression (Gr=-0.303; p=0.002). HADS-D, Moreover, statistically significant moderate correlation was found between caregiver burden (OBCS-T) and patients' symptoms (MDASI-Symptoms, r=0.302; p=0.002), and statistically significant weak correlation was found between caregiver burden (OBCS-T) and perceptions of greater symptom interference (MDASI-Interference, r=0.238; p=0.017).

Similarly, results indicated some statistically significant associations between OCBS-D and the categorical predictors. Female caregivers (p=0.045), and married (p=0.035), mentioned statistically significant more care difficulties compared to their respective counterparts. Caregivers of patients with ECOG score 3 reported greater burden than those who cared for a patient with ECOG score 1 or 2 (p=0.012) (Table 3). Concerning the relationship between burden (OBCS-D) and continuous/interval-scale caregiver's predictors, statistically significant moderate correlations were found between perceived difficulty during the patient' care and anxiety (G-HADS-A, r=-0.470; p<0.001), as well as perceived difficulty during the patient' care and depression (G-HADS-D, r=0.476; p<0.001). When correlations between caregiver burden (OBCS-D) patient psychosocial variables and were examined, three weak-to-moderate correlations were found: patients' anxiety (G-HADS-A, r=0.242; p=0.016), patients' symptoms (MDASI-Symptoms, r=0.288; p=0.004), and patients' perceptions of interference greater symptom (MDASI-Interference, r=0.331; p=0.001), all associated with greater caregiver burden.

#### Multivariate analyses

In multiple regression analyses, the stepwise

method was used in order to examine which of the variables from the univariate analyses could act as the strongest predictors of caregivers' burden. Results demonstrated that 32.2% of the variance (R<sup>2</sup>) in predicting caregiving burden-Time (OCBS-T) was accounted for by 'caregiver anxiety' (B=0.69, p<0.001), 'MDASI-Symptoms' (B=2.07, p=0.002), 'caregiver family status' (B=7.15, p=0.002), and 'caregiver minor child' (B=3.61. p=0.033). These predictors were retained in the final model (Table 4). Similarly, 38.1 of the variance (R<sup>2</sup>) in predicting caregiving burden-Difficulty (OCBS-D) was accounted for by 'caregiver depression' (B=0.70, p=0.007), 'caregiver anxiety' (B=0.57, p=0.019) 'MDASI-Symptoms' (B=2.36, p=0.002), and 'caregiver family status' (B=7.10, p=0.007) (Table 5).

#### Discussion

Caregivers often face difficult and time consuming tasks required for the care of cancer patients in a home setting. Cancer patients' care is described as a tiresome process that requires a lot of time and energy, sometimes for months or for years.<sup>24</sup> Caregiving is a difficult situation and in combination with the difficult process of cancer management can have a major impact on a caregiver's life.<sup>25</sup> The current study investigated the effects of both caregiver (sociodemographic characteristics and mood disorders) and patient factors (sociodemographic and clinical characteristics, anxiety and depression, severity and interference of symptoms of advanced cancer) on perceived caregiving burden regarding difficult and time-consuming tasks in а convenience sample of Greek family members caring for patients with advanced cancer in a home setting.

In the present study, caregivers' depression was the most important predictor of burden. This finding is consistent with other studies describing high levels of psychological morbidity in this group of informal caregivers.<sup>1,26</sup> Similarly Papastavrou et al.,<sup>16</sup> found strong correlations of depression with

perceived burden among caregivers of patients with cancer. There are also findings which emphasize on the fact that anxiety levels are increased in daughters of patients with cancer, as well as caregivers of patients with dementia.<sup>27,28</sup> Some researchers argued that burden is equal to depression.<sup>24,29</sup> Grunfeld's et al.,<sup>3</sup> claimed that, although patient's physical and emotional factors predicted caregiver distress, perceived burden is the strongest predictor of caregiver anxiety and depression.

Univariate and multivariate analyses showed that patient symptom, functional status and depressive mood can influence the perception of burden. Burden and depressed mood probably are based in predictors of burden reported consistently in the literature, including the caregiver gender, the patient symptom status, and the patient functional status. The patients declining health status definitely influences the caregiver's reactions, especially at the patients' transition to the more severe illness' stages.<sup>3,30,34</sup> In a Greek study, examining the psychological status of Greek cancer patient' caregivers, it was found that depression and anxiety as well as low quality of life was prominent.<sup>18</sup>

Severity of patient's symptoms can be the cause of reactions such as irritability, frustration and depression.<sup>31</sup> Evidence of patient dependency should be a definite warning sigh for healthcare professionals to caregivers involved.<sup>13</sup> There are studies, in which the patients' prognosis, metastatic disease and the presence of severe cancer related symptoms were found to be linked to a greater degree of burden to caregivers.<sup>15,32</sup> Depression of the patient is related to caregiver's distress and behavioural changes.<sup>33</sup> In a Greek study, patient's symptoms were not found to be associated with the caregiver's burden.<sup>18</sup>

Univariate analyses showed statistically significant associations between caregiver burden and caregiver gender, family status, and age.

Female caregivers perceived their caregiving role burdensome, confirming existing as more findings.<sup>16,34</sup> This preponderance may be related to the cultural "norm" requiring females to be the most devoted to family member's care. Moreover, the negative impact of care is shown to be higher in married than non-married caregivers, which is in agreement with existing evidence supporting that spouses are the busiest group of caregivers.<sup>35</sup> Also, the present study showed a negative correlation between burden and caregiver's age. Older people experienced less burden than younger, although adult caregivers experience physical vulnerability caused by ageing. However, results are inconsistent. Between several previous studies, younger caregivers mentioned more burden than the older and vice versa.<sup>36,37</sup>

The multiple regression analysis revealed that caregivers with minor child were more burdened (perceived the caregiving tasks as time consuming) compared to their respective counterparts. Similarly, in relevant literature, caregivers with caring responsibilities to minor child are most likely to feel distressed.<sup>38</sup>

There are several important limitations in this study. The sample was restricted to outpatients receiving palliative radiotherapy and consisted of patients with diverse primary diagnoses. In relevant literature, most studies use input of family carergivers of hospitalised patients with advanced cancer or patients receiving different types of care. Moreover, the heterogeneity of the primary diagnosis of the study sample inhibits the ability for generalization.

It is generally considered that additional variables, as the duration of illness, the intensive care, and the quality of relationship among the involved persons can also cause burden and emotional distress. Finally it is acknowledgeable the fact that the study population may not be entirely representative of the total population of family caregivers of patients with advanced cancer in Greece.

#### Conclusions

In the present study, Greek family caregivers who reported higher difficulty with the caregiving tasks were women, those unmarried, those with greater psychological morbidity and those who cared for patients with poor performance status, severe symptoms and higher score of anxiety. Moreover, Greek family caregivers who reported higher time consuming with the caregiving tasks were unmarried caregivers, younger, those with minor child, those with greater psychological morbidity and those who cared for patients with severe symptoms and poor performance status.

Factors that may predict caregivers' burden need further to be examined in order to clarify the notion of caregiver's response to severe illnesses states of beloved persons. Expectations from patients' families are generally greater in the context of a National Health System such as the Greek one, in which only a few dedicated plans exist, such as in-home health care services and only in a very limited form.

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# ANNEX

 Table 1: Demographic characteristics of the patient and caregiver sample (n=100)

		Patients		Caregivers		
Age (years)	Mean (SD)	63.9 (10.8	63.9 (10.8)		53.3 (12.55)	
	Range	35-87	35-87			
		n	%	N	%	
Gender	Male	63	63.0	24	24.0	
	Female	37	37.0	76	76.0	
Family status	Married			88	88.0	
	Unmarried			12	12.0	
Primary diagnosis	Lung	48	48.0			
	Breast	22	22.0			
	Urogenital	20	20.0			
	Other	10	10.0			
Educational	Primary	52	52.0	36	36.0	
attainment	High School	37	37.0	45	45.0	
	University	11	11.0	19	19.0	
Past surgery	No	53	53.0			
	Yes	47	47.0			
Past chemotherapy	No	42	42.0			
	Yes	58	58.0			
ECOG Performance	1	27	27.0			
status	2	37	37.0			
	3	36	36.0			
Minor child at home	No	86	86.0	69	69.0	
	Yes	14	14.0	31	31.0	
Place of residence	Same with patient			76	76.0	
	Other place of residence			24	24.0	
Previous caregiving	No			41	41.0	
experience	Yes			59	59.0	
Relationship with	Wife-husband			59	59.0	
patient	Child			27	27.0	
	other			14	14.0	
Daily working hours	Not-working-retired			62	62.0	
	4-16 hours			38	38.0	
Means of transport	Public transport			17	17.0	
	Private car			47	47.0	
	Taxi			36	36.0	

		Patients	Caregivers			
Abbreviations: ECOG – Eastern Cooperative Oncology Group						

 Table 2: Distribution of total and subscale scores of the questionnaires completed by patients and caregivers

	Mean	SD	Min	Max		
OCBS-T (C)	39.03	9.10	23.00	69.00		
OCBS-D (C)	33.48	10.70	14.00	63.00		
G-HADS-A (C)	12.31	5.03	1.00	21.00		
G-HADS-D (C)	9.40	4.70	0.00	21.00		
G-HADS-A (P)	8.11	3.97	0.00	17.00		
G-HADS-D (P)	8.10	4.63	0.00	19.00		
G-MDASI Symptoms (P)	2.51	1.18	0.47	6.47		
G-MDASI Interference (P)	6.15	1.94	0.00	10.00		
Abbreviations: C – Caregiver; P – Patient; G-HADS-D – Hospital Anxiety and Depression Scale-						
Greek version-Depression subscale; G-HADS-A – Hospital Anxiety and Depression Scale-Greek						
version-Anxiety subscale; G-MDASI – MD Anderson Symptom Inventory-Greek version;						

**Table 3:** Univariate analysis of the relationships between caregiving burden and sociodemographic andclinical patient and caregiver characteristics

		OCBS-D	OCBS-D		OCBS-T	
		Mean±SD	p-value	Mean±SD	p-value	
Gender (P)	Male	34,87±10.59	NS	39,68±8.62	NS	
	Female	31,03±10.45		37,92±9.89		
Gender (C)	Male	29,67±9.99	0,045	38,13±10.09	NS	
	Female	34,64±10.64		39,32±8.82		
Family status	Married	32,63±10.20	0,035	38,16±8.43	0.009	
(C)	Unmarried	39,50±12.37		45,42±11.52		
Primary	Lung	34,69±10.61		40,31±8.22		
Diagnosis	Breast	29,73±8.46	NS	36,36±8.43	NS	
	Urogenital	35,60±12.53		40,35±11.32		
	Other	31,40±10.28		36.10±9.10		
Educational	Primary	33,73±10.18		35,56±8.33		
attainment (P)	High School	33,24±12.25	NS	39,08±9.51	NS	
	University	32,82±7.32		41,09±11.64		
Education	Primary	31,09±10.50		38,03±8.18		
attainment (C)	High School	33,48±10.87	NS	38,98±8.86	NS	
	University	34,48±10.37		41,05±11.29		
Past surgery	No	34,12±9.98	NS	39,21±7.57	NS	
	Yes	32,79±11.52		38,83±10.65		
Past	No	34,07±11.52	NS	39,24±8.67	NS	
chemotherapy	Yes	33,00±10.06	-	38,88±9.47	-	
ECOG	1	29,26±9.05		35,30±7.33		
Performance	2	34,41±11.56	0,012	40,72±10.19*	0.041	
status	3	35,61± 10.17*	-	40,08±8.52*		
Minor child at	No	33,99±10.57	NS	38,77±8.72	NS	
home (P)	Yes	30,14±10.98	1	40,64±11.43		
Minor child at	No	32,39±10.01	NS	37,70±9.19	0,028	
home (C)	Yes	35,81±11.79	1	42,00±8.30		
Place of	Same with patient	33,61±10.37	NS	38,91±9.03	NS	

		OCBS-D		OCBS-T	
residence (C)	Other place of residence	32,96±11.72		39,42±9.51	
Previous	No	31,59±11.03	NS	38,56±9.91	NS
caregiving	Yes	34,75±10.28		39,36±8.57	
Relationship	Wife-husband	32,86±10.16		38,20±8.51	
with patient	Child	35,67±12.23	- NS	41,81±8.39	NS
	Other	31,64±9.43		37,14±12.01	
Daily working hours	Not-working-retired	33,23±10.02	2 NS 38,42±9.2		NC
	4-16 hours	33,82±11.75		40,03±8.85	- NS
Means of transport	Public transport	33,35±11.17		37,59±8.68	
	Private car	31,94±10.66	NS	38,17±8.35	NC
	Тахі	35,47±10.36		40,83±10.15	- כאו
Abbreviations: C	– Caregiver; P – Patient.				

**Table 4:** Multiple regression analysis of patient and caregiver variables associated with caregiving burden

 (OCBS-T)

		R <sup>2</sup>	Reference category	В	SE	p-value	
	G-HADS-A (C)	0.149		0.69	0.16	0.0005	
nethod	G-MDASI-Symptoms (P)	0.075		2.07	0.65	0.002	
vise r	Family status (C)	0.064	Married	7.15	2.30	0.002	
Stepv	Minor child (C)	0.033	No	3.61	1.67	0.033	
R <sup>2</sup> =0.322; F (4.95)=11.28. p<0.001							
Abbre	Abbreviations: C – Caregiver; P – Patient; G-HADS-D – Hospital Anxiety Scale-Greek version-Depression						
subscale; OCBS-T – Oberst Caregiving Burden Scale-Time; G-MDASI-M. D. Anderson Symptom Inventory							
– Greek version; SE – Standard error.							

\*Predictor variables not stepped into the equation at statistically significant levels:

**Πίνακας 5:** Multiple regression analysis of patient and caregiver variables associated with caregiving burden (OCBS-D)

		R <sup>2</sup>	Reference category	В	SE	p-value	
7	MDASI Symptoms (P)	0.072		2,36	0,73	0,002	
letho	G-HADS-D (C)	0.226		0,70	0,25	0,007	
Stepwise m	G-HADS-A (C)	0.037		0,57	0,24	0,019	
	Family status	0.045	Married	7,10	2,58	0,007	
R <sup>2</sup> =0.381, F(4.94)=14.45. p<0.001							
Abbreviat	Abbreviations: C – Caregiver; P – Patient; G-HADS-D – Hospital Anxiety Scale-Greek version-Depression						
subscale; G-HADS-A – Hospital Anxiety Scale-Greek version-Anxiety subscale; OCBS-D – Oberst Caregiving							
Burden Scale-Difficulty; G-MDASI-M. D. Anderson Symptom Inventory – Greek version; SE – Standard							
error.							