SHORT COMMUNICATION
ΒΡΑΧΕΙΑ ΔΗΜΟΣΙΕΥΣΗ

The prevalence of depressive symptoms in Greek medical residents in a period of financial crisis

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Επιπολασμός καταθλιπτικών συμπτωμάτων σε Έλληνες ειδικευόμενους εν μέσω της οικονομικής κρίσης

Περίληψη στο τέλος του άρθρου

Medical residents are reported to experience depression at rates higher than the general population, ranging from 20.9% to 43.2%, depending on a multitude of factors, including specialty, postgraduate year, sex, instrument used.[1] Depression is a major public health problem, and since the beginning of the financial crisis in Greece a stepwise increase has been documented in the one-month prevalence of major depression in the general population, from 3.3% in 2008, to 6.8% in 2009, 8.2% in 2011, and 12.3% in 2013.[2] The objective of this study was to examine the prevalence of depressive symptoms in Greek resident physicians at this time of crisis.

MATERIAL AND METHOD

A cross-sectional study was conducted in the period May to July 2016 on 135 medical residents (n=128) in three tertiary hospitals in Athens. An anonymous self-administered questionnaire was distributed to the residents and it was explained to them that the survey was voluntary and non-participation would incur no personal disadvantage. The study protocol was approved by the ethical committees of the three hospitals. The demographic information elicited included sex, age, marital status, training specialty, and year of residency. Data were also collected on body mass index (BMI), smoking, alcohol consumption, sleep, training satisfaction, health status, chronic health problems, pain and medication use. Depressive symptoms were assessed using the Patient Health Questionnaire (PHQ-9), validated for use in the Greek language, to determine the overall prevalence of mild, moderate, moderately severe, and severe depressive symptoms.[3,4] The Zung Self-Rating Anxiety Scale was used to quantify the level of anxiety.[5] The Zung scale categorizes participants into one of four categories: normal, mild to moderate anxiety levels, marked to severe anxiety levels, and extreme anxiety levels. The short International Physical Activity Questionnaire (IPAQ-short), validated in Greek, was used to measure the physical activity of the participants.[6] Analysis was made by t-test, Chi-square test, and ordered logistic regression, using the Stata 12.1 (StataCorp, Texas, USA), and differences were regarded as statistically significant when $p < 0.05$ (two-tailed).

RESULTS

Of the 135 residents approached, 128 participated in the study (94.8%). Table 1 shows the demographic and psychosocial characteristics of the participating residents. The mean age (±standard deviation [SD]) of the residents was 32.5±4.5 years, and 61 were males (47.7%) and 67 females (52.3%). Of 122 participants (6 residents did not fully complete the PHQ-9), 59.2% reported depressive symptoms (PHQ-9 score ≥5), the majority of whom (41 residents) had mild depressive symptoms (PHQ-9 score

Table 1. Characteristics of the total study population of medical residents (n=128), characterized as depressed (cutoff of 10 or more on PHQ-9) and non-depressed.

	Values*			
	Total population	**Depressed**	**Non-depressed**	**p-value**
Age (y)	32.5±4.5	32.2±4.8	32.7±4.4	0.63
Sex				
Male	61 (47.7%)	14	46	0.17
Female	67 (52.3%)	22	40	
BMI (kg/m²)	24.6±4.1	25.2±4.5	24.3±4.0	0.31
Marital status				
Single	95 (74.2%)	10	20	
Married	31 (24.2%)	26	65	0.75
Divorced	2 (1.6%)	0	1	
Specialty				
Medical	82 (65.6%)	19	59	
Surgical	37 (29.6%)	14	22	0.25
Other	6 (4.8%)	1	4	
Year of residency	3.6±1.9	3.4±1.9	3.7±1.9	0.44
Training satisfaction				
Low satisfaction	23 (18.4%)	11	12	0.28
Average satisfaction	52 (41.6%)	10	40	
High satisfaction	50 (40.0%)	14	33	
Working hours per week	76±13.5	77.1±14.7	75.9±13.1	0.69
Frequency of overnight shifts	6.4±1.1	6.5±0.7	6.3±1.2	0.30
Days off per month	1.4±1.7	1.2±1.5	1.4±1.8	0.54
Sleep				
During normal day	6.3±1.0	6.2±1.2	6.3±0.9	0.55
During overnight shift	3.5±1.3	3.2±1.5	3.5±1.1	0.32
Health status				
Poor	1 (0.8%)	1	0	
Average	13 (10.2%)	7	5	**0.04**
Good	68 (53.5%)	16	47	
Very good/excellent	45 (35.4%)	11	34	
Chronic health problem				
No	93 (77.5%)	21	66	**0.05**
Yes	27 (22.5%)	12	15	
Medication use				
No	74 (57.8%)	17	55	0.11
Yes	54 (42.2%)	19	31	
Physical pain during last 4 weeks				
No	39 (30.7%)	6	32	
Mild	41 (32.3%)	13	25	
Moderate	32 (25.2%)	7	23	**0.02**
Severe	13 (10.2%)	8	5	
Extreme	2 (1.6%)	1	1	

Table 1. (continued) Characteristics of the total study population of medical residents (n=128), characterized as depressed (cutoff of 10 or more on PHQ-9) and non-depressed.

	Values*			
	Total population	**Depressed**	**Non-depressed**	**p-value**
Smoking				
No	89 (69.5%)	24	59	0.83
Yes	39 (30.5%)	12	27	
Alcohol consumption				
No	48 (37.5%)	15	31	0.68
Yes	80 (62.5%)	21	55	
*Physical activity**				
Low PA profile	16 (19.5%)	9	5	
Moderate PA profile	47 (57.3%)	10	36	**0.02**
High PA profile	19 (23.2%)	4	14	
*Depression***		36 (29.5%)	86 (70.5%)	
No	49 (40.8%)			
Mild	41 (34.2%)			
Moderate	22 (18.3%)			
Moderately severe	7 (5.8%)			
Severe	1 (0.8%)			
On medication	2			
Anxiety#				
Normal range	54 (46.6%)	11	41	
Mild to moderate anxiety levels	57 (49.1%)	13	41	0.07
Marked to severe anxiety levels	5 (4.3%)	4	1	

* Values are mean±SD for continuous variables, and n (%) for categorical variables. Analyses were performed using t-test, Chi-square test, and ordered logistic regression

** Physical activity (PA) classification criteria: Low PA profile: Total PA score <600 MET.min.wk^{-1}; moderate PA profile: Vigorous PA score ≥480 MET.min.wk^{-1} or total PA score ≥600 MET.min.wk^{-1}; high PA profile: Vigorous PA score ≥1500 MET.min.wk-1 or total PA score ≥3000 MET.min.wk-1

*** Scores of 5, 10, 15, and 20 represent cut points for mild, moderate, moderately severe and severe depression, respectively

\# The "Anxiety Index" score, according to the Zung Self-Rating Anxiety Scale, classifies the level of anxiety: 20–44 normal range; 45–59 mild to moderate anxiety levels; 60–74 marked to severe anxiety levels; and 75–80 extreme anxiety levels. There were no participants with extreme anxiety levels

PHQ-9: Patient Health Questionnaire, BMI: Body mass index

5–9). Two residents were already receiving antidepressant medication, both of whom reported mild depressive symptoms. Using the cutoff of ≥10,[1] with a sensitivity of 93% and specificity of 88% for the diagnosis of major depressive disorder,[3] the prevalence was 29.5% (tab. 1). Poorer health status, the presence of chronic health problems, physical pain during the last 4 weeks, and lower physical activity were more prevalent amongst residents with depressive symptoms (tab. 1).

DISCUSSION

Overall, a high prevalence of depression was documented in a sample of Greek medical residents (29.5%); this is the highest rate ever reported among studies using the PHQ-9 to measure the prevalence of depressive symptoms in residents.[1] The size of the problem is magnified in view of the continuing economic crisis plaguing Greece and the associated decline in mental health.[2] There is a need for the Greek medical community to implement interventions to reduce depression among medical residents.

ΠΕΡΙΛΗΨΗ

Επιπολασμός καταθλιπτικών συμπτωμάτων σε Έλληνες ειδικευόμενους εν μέσω της οικονομικής κρίσης

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Οι ειδικευόμενοι ιατροί βιώνουν υψηλότερα ποσοστά κατάθλιψης από τον γενικό πληθυσμό. Σκοπός του παρόντος άρθρου ήταν η μελέτη του επιπολασμού καταθλιπτικών συμπτωμάτων σε ειδικευόμενους εν μέσω της οικονομικής ύφεσης, η οποία διεξήχθη κατά το χρονικό διάστημα Μαΐου-Ιουλίου του 2016 σε ειδικευόμενους 3 τριτοβάθμιων νοσοκομείων της Αθήνας. Καταγράφηκαν δημογραφικά στοιχεία και δεδομένα σχετικά με τον δείκτη μάζας σώματος, το κάπνισμα, την κατανάλωση οινοπνεύματος, τον ύπνο, την ειδικότητα και την ικανοποίηση από την εκπαίδευση, την κατάσταση υγείας, τα χρόνια προβλήματα υγείας, τον πόνο και τη χρήση φαρμάκων. Τα καταθλιπτικά συμπτώματα αξιολογήθηκαν χρησιμοποιώντας το ερωτηματολόγιο υγείας ασθενούς (PHQ-9). Από τους 135 ειδικευόμενους που προσεγγίστηκαν, 128 συμμετείχαν στην έρευνα. Η μέση ηλικία ήταν 32,5±4,5 έτη, 61 ήταν άνδρες και 67 γυναίκες. Σε ποσοστό 59,2% αναφέρθηκαν καταθλιπτικά συμπτώματα. Όταν χρησιμοποιήθηκε το όριο ≥10, που έχει υψηλή ευαισθησία και ειδικότητα για τη διάγνωση μείζονος καταθλιπτικής διαταραχής, τότε ο επιπολασμός ήταν 29,5%. Η χειρότερη κατάσταση υγείας, η παρουσία χρόνιων προβλημάτων υγείας, ο σωματικός πόνος κατά τη διάρκεια των τελευταίων 4 εβδομάδων και η χαμηλότερη σωματική δραστηριότητα ήταν πιο συχνά σε ειδικευόμενους με κατάθλιψη. Συμπερασματικά, ο επιπολασμός κατάθλιψης σε ένα δείγμα Ελλήνων ειδικευόμενων ήταν εξαιρετικά υψηλός (29,5%). Η ελληνική ιατρική κοινότητα πρέπει να εφαρμόσει παρεμβάσεις που θα συνδράμουν στη μείωση της κατάθλιψης μεταξύ των ειδικευόμενων ιατρών.

Λέξεις ευρετηρίου: Ειδικευόμενοι, Ελλάδα, Κατάθλιψη, PHQ-9

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