Anxiety and depression levels of outpatients and inpatients in a private hospital

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Studies refer to the link between mental well being and medical illnesses. The pathways between mental and physical illness are not fully understood. Several possible mechanisms and synergies exist.¹ It is possible that mental disorders may lead to physical conditions or physical conditions may lead to mental disorders.² Although studies are generally trying to show the association and the provocative effect of depression and anxiety in different kinds of medical illnesses, little is known on the difference in inpatients and outpatients.^{1,2} In this study, using a sample of patients of a private hospital we aimed to determine probable socio-demographic factors affecting psychological wellbeing, the prevalence of anxiety, and depression levels of in and outpatients; the association of depression, and anxiety with internal, and surgical branches.

This cross-sectional descriptive study was conducted at the Bilgi Hospital that has 50 beds in Konya, Turkey. All consecutive adult patients admitted to this hospital between September, and December 2006 constituted the study population. The inclusion criterion for the patients to be enrolled in this study was ≥17 years of age, and able to communicate enough, with neither an emergency situation, nor a diagnosed psychiatric disease. Patients were informed on the nature and the purpose of the study, and informed consent was obtained from each of them. Participants were assured of their right of refusal to participate in or to withdraw from the study at any stage. Permission for this study was received from the Administration Unit of Bilgi Hospital.

Data were collected by a questionnaire form developed by researchers including questions on demographical characteristics, such as age, gender, educational level, marital status, and occupation. Anxiety and depression symptoms were assessed with Hospital Anxiety and Depression Scale (HADS) in the same questionnaire.³ This self-report scale consists of 14

Table 1	•	The mean anxiety	and depression	levels of patient	s and the	differences	between	variables	according to	Chi-square,	Student t-	-test, a	nd Kruskal-
		Wallis.											

Parameters	Anxiety level		Mean		Depress	sion level	Mean	
	≤10, n (%)	≥10, n (%)	anxiety level	<i>P</i> -value	≤7, n (%)	>7, n(%)	level	<i>P</i> -value
Age								
17-40 years	125 (51.2)	38 (15.6)	7.93±3.92	0.098^{*}	92 (37.7)	71 (29.1)	7.13±4.01	0.104^{*}
41-64 years	38 (15.6)	17 (7.0)	8.72±3.77	0.043**	23 (9.4)	32 (13.1)	8.72±4.28	0.038**
65 and above	15 (6.1)	11 (4.5)	9.30±5.05		11 (4.5)	15 (6.1)	8.26±4.52	
Gender								
Male	75 (30.7)	15 (6.1)	7.02±3.70	0.005^{*}	45 (18.4)	45 (18.4)	7.40±4.25	0.695^{*}
Female	103 (42.2)	51 (20.9)	8.98±4.05	0.005***	81 (33.2)	73 (29.9)	7.74±4.13	0.697***
Civil status								
Married	151 (61.9)	50 (20.5)	8.02±4.06	0.244^{*}	105 (43.0)	96 (39.3)	7.62±4.19	0.020^{*}
Unmarried	18 (7.4)	10 (4.1)	9.25±4.07	0.095**	18 (7.4)	10 (4.1)	6.03±3.68	0.511**
Widowed	9 (3.7)	6 (2.5)	9.53±3.18		3 (1.2)	12 (4.9)	10.46±3.35	
Education level								
Illiterate	16 (6.6)	12 (4.9)	10.46±4.45	0.131*	5 (2.0)	23 (9.4)	10.53±3.62	0.000^{*}
Primary school	108 (44.3)	35 (14.3)	7.88±3.76	0.286**	67 (31.1)	67 (27.5)	7.77±4.18	0.001**
≥High school	54 (22.1)	19 (7.8)	8.15±4.17		45 (18.4)	28 (11.5)	6.17±3.72	
Occupation								
Housewife	93 (38.1)	44 (18.0)	7.93±3.92	0.080^{*}	68 (27.9)	69 (28.3)	8.08±4.05	0.720^{*}
Employee	69 (28.3)	20 (8.2)	7.75±3.89	0.025**	49 (20.1)	40 (16.4)	6.89±4.27	0.543**
Retired	16 (6.6)	2 (0.8)	5.83±3.45		9 (3.7)	9 (3.7)	7.61±4.31	
Patient source								
Outpatient	62 (25.4)	25 (10.2)	8.42±4.05	0.659^{*}	39 (16.0)	48 (19.7)	7.95±3.87	0.113^{*}
Inpatient	116 (47.5)	41 (16.8)	8.17±4.03	0.660***	70 (28.7)	70 (28.7)	7.42±4.32	0.114***
Department								
Internal branches	35 (14.3)	22 (9.0)	9.56±4.72	0.025^{*}	24 (9.8)	33 (13.5)	8.85±4.57	0.100^{*}
Surgical branches	143 (58.6)	44 (18.0)	7.86±3.72	0.025***	102 (41.8)	85 (34.8)	7.23 ±3.98	0.101***
Total	178 (73.0)	66 (27.0)	8.26±4.03		126 (51.6)	118 (48.4)	7.61±4.17	
	* P-1	value for Chi-squa	ure, ** <i>P</i> -value for I	Kruskal-Walli	s, ***P-value for St	udent-t test		

Brief Communication

items, 7 for anxiety, and 7 for depression. Each item was rated on a scale from 0 to 3. Validity, and reliability of the Turkish version of the scale is made, and the cut-of was determined as 7 for depression, and 10 for anxiety in Turks.⁴ The psychological status of patients was assessed via the cut-of levels according to separate scale for anxiety and depression. We compared the statistical significance in parametric variables with Student's t-test, and in non-parametric variables with Chi-square, and Kruskal-Wallis tests. All tests were too tailed, and a *P*-value less than 0.05 was considered significant.

Two hundred and forty-four medically ill patients constituted the study population. The mean age of the students was 37.25±16.92 years. One hundred and fifty-four (63.1%) of the respondents were female and 58.6% (n=143) of them were graduated in primary school. The mean anxiety score was 8.26±4.03 and the mean depression score was 7.61±4.17. According to cut-off levels 27% of patients had symptoms of anxiety, and 48.4% had depressive symptoms. In this study, we found some associations between gender, age, civil status, education level, occupation, and the disease diagnosis. According to age mean anxiety, and depression levels were significantly higher in patients 65 years and older (p=0.043, p=0.038). In terms of gender females were significantly more anxious (p=0.005) but not more depressive (p=0.695) than men. We determined that widowed patients were more depressive (p=0.020) like illiterate patients (p=0.001), but there was not a difference in anxiety levels. Mean anxiety levels of housewives (p=0.025) and inpatients of internal branches (p=0.025) were meaningful. Although the comparison of internal and surgical branches showed no difference in depression levels of patients (p=0.100), the anxiety level of the patients in internal branches was meaningful (p=0.025). The mean anxiety and depression levels of patients and the differences between variables according to Chi-square, Student's t-test, and Kruskal-Wallis are presented in Table 1.

As reported before, once again this study shows that patients with co-morbid illnesses have high anxiety and depression levels independent of what the medical illness is.² Nonexistence of a difference between inpatient and outpatients is another result we reported herein, supporting this theory. Ortega et al¹ reported association between internal diseases, and anxiety, and depressive disorders. In a study,⁵ authors noted that in hospitalized patients 45.1% of psychiatric consultations were from medicine. Similarly, when we separated the patients into 2 groups by means of diagnosis such as internal and surgical illnesses, patients who had internal diseases were significantly more anxious. In another survey, which was carried out in 17 countries,² authors noted that all physical conditions were significantly associated with depressive and/or anxiety disorders. In addition, co-morbid depressive-anxiety disorder was more strongly associated with several physical conditions.

In conclusion, this study shows that every fourth medically ill inpatient or outpatient is at risk for anxiety, and approximately half are at risk for depression. Older age groups, females, widows, illiterates, housewives, and patients of internal branches are the most fragile ones. Screening of all patients with simple scales or questions on depression and anxiety in the standard medical interview may help to diagnose and treat many underdiagnosed cases, which in whole will affect healthy life behaviors, treatment, adherence to treatment, hospital stay, morbidity, mortality, quality of life, wellbeing, and health costs.^{2,3,5}

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