

# The Association Between Burnout, and Depressive Symptoms in a Turkish Military Nurse Sample

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## ÖZET:

Bir Türk askeri hemşire örnekleminde tükenmişlik ve depresif belirtiler arasındaki ilişki

**Amaç:** Bu araştırmanın amacı Türk askeri hemşirelerinde tükenmişlik sendromu ile depresyon arasındaki ilişkiyi değerlendirmektir.

**Yöntem:** Çalışma, Nisan 2007'de Ankara'da görev yapan Türk askeri hemşireleri arasında yürütüldü. Toplam 490 hemşireden 377'si (%76.9) çalışmaya dahil edildi. Katılımcılara yarı yapılandırılmış görüşme formu, Maslach tükenmişlik ölçeği (MTÖ) ve Beck Depresyon ölçeği (BDÖ) uygulandı. Sürekli değişkenler t-test ve ANOVA kullanılarak karşılaştırıldı.

**Bulgular:** Katılımcıların yaş ortalaması  $29.7 \pm 5.4$  olarak bulundu. Cronbach alfa değeri Duygusal Tükenme (DT), Duyarsızlaşma (D) ve kişisel başarı duygusunda azalma (KB) için sırasıyla 0.87, 0.71, ve 0.83, BDÖ için ise 0.93 olarak bulundu. BDÖ ortalama puanı MTÖ ve alt ölçek puanları ile anlamlı pozitif korelasyon gösterdi. BDÖ maddelerinden 18'nin puanları MTÖ ve alt ölçeklerinin puanları ile anlamlı korelasyon gösterirken, kiloyu, iştah kaybı ve iritabilite maddeleri ile göstermedi. Otuz yaş veya üzerinde olan kronik hastalığı bulunan hemşireler daha yüksek depresif puan aldılar.

**Tartışma:** Sonuçlarımız depresif belirtiler ile tükenmişliğin tüm unsurları arasında kuvvetli bir ilişki olduğunu ortaya koymuştur. Bu çalışma aynı zamanda tükenmişlik ve depresyonun farklı kavramlar olduğunu, depresyonun aynı zamanda kilo kaybı ve iştah kaybı gibi fizyolojik boyutunun da olduğunu teyit etmiştir.

**Anahtar sözcükler:** Tükenmişlik; depresif semptomlar; hemşireler; ilişki; askeri

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## ABSTRACT:

The association between burnout, and depressive symptoms in a Turkish military nurse sample

**Objective:** This study aims to investigate the association between the burnout syndrome and depressive symptoms among Turkish military nurses.

**Methods:** The study was conducted among Turkish military nurses in Ankara during April 2007. From a total of 490 Nurses, 377 (76.9%) were included in the study. The participants completed a self structured questionnaire, Maslach Burnout Inventory (MBI), and Beck Depression Inventory (BDI). The continuous variables were compared using the student t-test or ANOVA.

**Results:** The mean age of participants was  $29.7 \pm 5.4$ . Cronbach alpha values were 0.87, 0.71, and 0.83 for emotional exhaustion (EE), depersonalization (DP), and reversed reduced personal accomplishment (RPA) respectively, and was 0.93 for BDI. BDI mean score was correlated significantly with MBI mean score and mean scores of its all subscales. Of the all items of BDI, while the scores of 18 items were correlated significantly with MBI mean score and mean scores of its all subscales, the scores of remaining 3 items namely weight loss, loss of appetite, and irritability were not. Nurses at age 30 or more and nurses with chronic disease had higher depressive scores.

**Conclusions:** Based on our results a strong correlation exists between depressive symptoms and all components of burnout syndrome. This study also demonstrated that the burnout syndrome and depression are not identical, while depressive symptoms include physiological involvement like weight loss and loss of appetite, burnout syndrome does not.

**Key words:** Burnout, depressive symptoms, nurses, correlation, military

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## INTRODUCTION

The association between burnout syndrome and depression concerned many researchers. Glass and McKnight (1996) reviewed 18 studies that investigated the relationship between the burnout and depression (1). They concluded that depression and burnout are not identical, although symptoms of depression and burnout, notably the emotional exhaustion component, are positively related. Similarly in their study Leiter and Durup (1994) suggested

that burnout and depression are indeed separate factors (2). Breninkmeyer et al. (2001) concluded that depression and burnout seem closely related, but they are certainly not identical twins (3). Burnout was also shown to be associated with depressive disorders (4). A more recent study by Ahola and Hakanen (2007) indicated there is a reciprocal relationship between burnout and depressive symptoms (5). Honkonen et al. 2006 demonstrated that burnout is associated with physical illnesses (6) and also burnout predicts medically certified sickness absences

(Toppinen-Tanner et al., 2005) (7).

This study aims to investigate the association between the burnout syndrome and depressive symptoms among Turkish military nurses.

## METHODS

A cross sectional study was carried among military nurses working at Gulhane Hospital in Ankara during April 2007. Of the total 490 nurses, 377 participated in the study with a completion rate of 76.9 %. The participants were requested to fill out a self assessment questionnaire. Part of the questionnaire included 22 items of the Maslach Burnout Inventory (MBI) (8). The MBI comprises three subscales: emotional exhaustion (9 items), depersonalization (5 items), and personal accomplishment (8 items). The Turkish version of this inventory was adopted by Ergin (1996) (9) and each item of the Turkish version is scored 0 for "never" and 4 for "always," but the items of lack of personal accomplishment are reversed.

Another part of the questionnaire included Beck Depression Inventory. The Beck Depression Inventory was devised in 1961 by Beck et al. and was revised in 1971 (10). This inventory includes 21 items. Questions are rated on a 4-point scale between 0 and 3, and diagnostic ranges are determined. It is a self-report

questionnaire that is widely used to assess the incidence and severity of depressive symptoms in the community (11). Since the cross-cultural application of this inventory for the Turkish people in 1980 (12) and 1988 (13), many studies were conducted among Turkish samples (14-15).

## Statistical Analysis

Questionnaires with no missing MBI and BDI data were included in the analysis.

We determined each of the three MBI subscale scores and the total score. Continuous variables namely, BECK scores, MBI, and its subscale scores were compared using the student t-test or ANOVA. All tests were two sided, and p values smaller than 0.05 were considered statistically significant. Analyses were performed using the SPSS 15.0 software package.

**Table 1: Correlation matrix between BDI mean scores and the mean scores of MBI and its subscales**

	Beck	EE	DP	RPA	MBI
EE	.385**				
DP	.336**	.596**			
RPA	.351**	.430**	.475**		
MBI	.441**	.879**	.795**	.763**	
AGE	.050	-.009	-.057	-.049	-.032

\*\*Correlation is significant at the 0.01 level (2-tailed).

**Table 2: Correlation matrix between individual BDI item mean scores and the mean scores of MBI and its subscales**

	EE	RPA	DP	MBI	BECK
Mood	.392(**)	.366(**)	.346(**)	.455(**)	.672(**)
Pessimism	.437(**)	.336(**)	.339(**)	.462(**)	.660(**)
Sense of failure	.202(**)	.229(**)	.339(**)	.301(**)	.653(**)
Lack of satisfaction	.422(**)	.324(**)	.333(**)	.446(**)	.732(**)
Guilty feeling	.246(**)	.253(**)	.334(**)	.329(**)	.654(**)
Sense of punishment	.297(**)	.316(**)	.344(**)	.383(**)	.618(**)
Self-hate	.309(**)	.266(**)	.299(**)	.356(**)	.716(**)
Self-accusations	.205(**)	.250(**)	.203(**)	.257(**)	.609(**)
Self-punitive wishes	.060	.138(**)	.231(**)	.157(**)	.575(**)
Crying spells	.322(**)	.254(**)	.309(**)	.362(**)	.715(**)
Irritability	.168(**)	.086	.090	.146(**)	.562(**)
Social withdrawal	.333(**)	.300(**)	.296(**)	.377(**)	.730(**)
Indecisiveness	.268(**)	.276(**)	.305(**)	.343(**)	.697(**)
Body image	.244(**)	.238(**)	.284(**)	.304(**)	.702(**)
Work inhibition	.301(**)	.274(**)	.299(**)	.355(**)	.688(**)
Sleep disturbance	.247(**)	.194(**)	.173(**)	.250(**)	.606(**)
Fatigability	.335(**)	.311(**)	.263(**)	.378(**)	.705(**)
Loss of appetite	.020	.012	.106(*)	.045	.467(**)
Weight loss	-.032	.047	.070	.014	.408(**)
Somatic Preoccupation	.146(**)	.113(*)	.201(**)	.185(**)	.601(**)
Loss of libido	.295(**)	.268(**)	.167(**)	.301(**)	.628(**)

\*\*Correlation is significant at the 0.01 level (2-tailed).

\*Correlation is significant at the 0.05 level (2-tailed).

**Table 3: Comparisons of the BECK, MBI, EE, DP, and RPA mean scores between nurse groups based on age and having a chronic disease.**

	BECK		EE		DP		RPA	
	n	mean	n	mean	n	mean	n	mean
Age (year)								
≤29	199	9.5±8.7	212	24.8±6.9	210	10.7±3.7	208	20.8±5.1
≥30	154	12.1±10.7	164	25.3±7.3	165	10.6±3.9	161	20.7±5.5
p value		0.014		0.467		0.660		0.919
Chronic disease								
Yes	59	14.2±13.2	67	26.6±7.8	68	10.3±3.6	68	21.4±5.5
No	267	10.1±8.7	307	24.8±6.9	306	10.8±3.8	299	20.6±5.2
P value		0.010		0.053		0.388		0.274

## RESULTS

The mean age of participants was 29.7±5.4 with a minimum of 21 and a maximum of 48. Cronbach alpha values were 0.87, 0.71, and 0.83 for EE, DP, and reverse RPA respectively.

Cronbach alpha value for BDI was 0.93. The mean score of BDI was 10.6 for the total 353 valid cases. By using 17 as a cutting point for depression, 19.0% of nurses fell into depressive group. The proportion of unmarried nurses was 43% and the number of nurses with a chronic disease was 68 (18%).

BDI mean scores were correlated significantly with MBI mean scores and all mean subscale scores (Table 1). The majority of the BDI components were associated significantly with MBI and its three subscales, but weight loss, loss of appetite, and irritability were not (Table 2).

While there were significant differences for BDI scores between categories based on age and having a chronic disease, there were no differences for MBI, EE, DP, and RPA scores as seen Table 3.

## DISCUSSION

We investigated the association between burnout syndrome and depressive symptoms in this study. Our results revealed that a strong correlation exists between depressive symptoms and all components of burnout, which is in parallel with reports in the literature (1). EE seemed to have the strongest association with depressive symptoms as indicated previously (2).

The answer to question of, whether burnout and depression are identical, was “no” according to many researchers before (2-4). To find out if this answer was correct for our study population of Turkish military

nurses, we conducted a correlation analysis by taking all BDI items individually. Eighteen of 21 total BDI items were significantly correlated with MBI and its three components. While irritability correlated with EE and total MBI scores and loss of appetite correlated with only RPA, weight loss correlated with none of them. Our findings support that burnout and depression are not identical, while depression includes physical involvement like weight loss and loss of appetite, burnout does not. This finding may point to more noradrenergic system role in burnout, as opposed to more serotonergic system role in depression. It seems that burned-out individuals are still ‘in the battle’ trying to protect themselves from the harmful effects of a bad situation, while depressed individuals have given up and the situation has deepened to involve their bodies. Apparently, when burned-out individuals lose their hopes they seem to develop depression as a consequence.

One of the remarkable findings in our study was that nurses with a chronic disease had significantly higher depressive scores but not significantly higher burnout scores than nurses without a chronic disease. In a previous study carried with 838 pain patients, it was found that the pain patients scored higher on symptoms of depression and burnout than the patients without pain (16). However, they found that symptoms of depression were not associated with pain and pain was not related to depression. Instead depression among the pain patients was associated with use of sedatives, which may be a reflection of severity of the problems. The relationship between burnout and physical illness was reported in the literature (7). In our study the nurses at age 30 or older had significantly higher scores of BDI than nurses younger than 30. However this difference between age groups was not found for any of burnout scores. Getting older and

having a chronic disease seem as other differences between burnout and depressive symptoms. These two factors could be indicators of losing hope that may be one of the key points between burnout and depression.

In sum, there is a strong association between burnout

and depression, but they are not the same condition. Physiological involvement is a component of depression and one of the differences between two conditions. “Hopelessness” is possibly one of the key points at transition from burnout to depression.

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