Araştırma / *Original article*

Alexithymia in social anxiety disorder: is there a specific relationship or is it a feature of comorbid major depression?

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ABSTRACT

Objective: *Alexithymia has been extensively studied in the literature regarding its relationship with major depression. However, patients with anxiety related problems also have high alexithymic traits. Our study aimed to assess the presence of alexithymia and clinical variables associated with it in a specific subset of patients with anxiety, namely social anxiety disorder (SAD).* ***Methods:*** *140 patients with generalized type SAD were assessed by using Toronto Alexithymia Scale-20 (TAS-20), Liebowitz Social Anxiety Scale (LSAS), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI) and Global Assessment of Functioning Scale (GAF). Participants with TAS-20 scores ≥61 were considered as alexithymic and they were compared with non-alexithymic (TAS-20 <61) participants in terms of rating scale scores, clinical characteristics and comorbidity profiles.* ***Results:*** *46 patients were alexithymic (32.9%) and 94 patients constituted the non-alexithymic group. In comparisons between the two groups, alexithymic group was characterized by a lower mean age at onset of SAD, higher BDI, BAI, LSAS scores and total number of comorbid diagnoses and lower mean current and previous year GAF scores. However, there appears to be a weaker relationship between SAD and alexithymia after controlling for depression.* ***Discussion:*** *Our results suggest that alexithymia is associated with a more severe symptomatology, higher comorbidity and functional impairment in patients with SAD. However, this association may be stronger in patients who have current comorbid major depression than in other patients with SAD.* ***(Anatolian Journal of Psychiatry 2015; 16(2):130-137)***

Key words: *alexithymia, social anxiety, comorbidity, anxiety disorders, major depression*

Sosyal anksiyete bozukluğunda aleksitimi: Özgül bir ilişki mi, yoksa majör depresyon eş tanısının bir özelliği mi?

ÖZET

Amaç: *Aleksitimi majör depresyon ile ilişkisi açısından literatürde geniş bir biçimde araştırılmıştır. Bununla birlikte anksiyete ile ilgili sorunları olan hastalarda da aleksitimik özellikler sık görülmektedir. Çalışmamızda anksiyete bozuklukları arasında özgül bir alt grup olan sosyal anksiyete bozukluğu (SAB) hastalarında aleksitiminin varlığı ve onunla ilişkili klinik değişkenlerin değerlendirilmesi hedeflenmiştir.* ***Yöntem:*** *Yaygın tip SAB tanılı 140 hasta Toronto Aleksitimi Ölçeği-20 (TAÖ-20), Liebowitz Sosyal Anksiyete Ölçeği (LSAÖ), Beck Depresyon Ölçeği (BDÖ), Beck Anksiyete Ölçeği (BAÖ) ve İşlevselliğin Genel Değerlendirilmesi (İGD) ile değerlendirildi. TAÖ-20 skoru ≥61 olan katılımcılar aleksitimik olarak değerlendirildi ve ölçek skorları, klinik özellikleri ve eş tanı profilleri aleksitimik olmayan (TAS-20 <61) katılımcılarla karşılaştırıldı.* ***Bulgular:*** *46 hasta aleksitimikti (%32.9) ve 94 hasta da aleksitimik olmayan grubu oluşturdu. İki grup arası karşılaştırmalarda aleksitimik grupta ortalama SAB başlangıç yaşı daha*

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düşüktü, BDÖ, BAÖ, LSAÖ skorları ile eş tanı sayısı daha yüksekti, şimdiki ve önceki yıldaki İGD skorları daha düşüktü. Bununla birlikte depresyon açısından kontrol edildiğinde SAB ile aleksitimi arasındaki ilişki daha zayıf görünüyordu. ***Tartışma:*** *Bulgularımız aleksitiminin SAB hastalarında belirtilerin daha şiddetli olması, daha yüksek eş tanı oranı ve daha fazla yeti yitimi ile ilişkili olduğunu düşündürmektedir. Öte yandan bu ilişki halen aktif bir majör depresif episod içerisinde olan hastalarda diğer SAB hastalarına göre daha güçlü olabilir.* ***(Anadolu Psikiyatri Derg 2015; 16(2):130-137)***

Anahtar sözcükler: *Aleksitimi, sosyal anksiyete, eş tanı, anksiyete bozuklukları, majör depresyon*

INTRODUCTION

Alexithymia is described as poor ability to identify own feelings and to communicate them to others accompanied by externally oriented thinking. The reported prevalence of alexithymia in general population has been varied between approximately 10-15%.[1-6]

In the literature on psychosomatic diseases, alexithymia was originally considered as a stable feature of personality.[7] Later it was suggested that alexithymia could also represent a state-like secondary phenomenon after somatic disease or psychological stress. More recent studies have established that alexithymia is not only related to psychosomatic diseases, but also to other somatic and psychiatric disorders as well.

Among psychiatric disorders, major depression can be considered as the one that has the most well established relationship with alexithymia. 41-50% of depressed patients were found to have alexithymia.[8,9] An association between severity of depression and alexithymia has also been reported.[8,10,11] Alexithymia was associated with depression also in non-clinical samples.[4,12]

There are also follow-up studies reporting an association between improvement of depressive symptoms and decreasing TAS scores.[10,13-17] Their findings fueled discussions on whether alexithymia is a state dependent phenomenon or a stable personality trait. In the literature, there are studies that support the former hypothesis.[10,13,14,17] However, one can also find studies that suggest validity of the latter in different samples.[18-20] Saarijarvi and colleagues concluded that alexithymia represents a stable personality trait but is also a state-dependent phenomenon.[21]

Anxiety was also investigated in terms of its relationship to alexithymia. The anxiety symptoms were higher in depressed patients with alexithymia than in non-alexithymic depressed patients.[8] Non-clinical adolescents with alexithymia scored higher on State Trait Anxiety Inventory (STAI) than nonalexithymic subjects.[22] A correlation between TAS scores and anxiety sensitivity has also been reported in panic disorder[23] as well as in a non-clinical sample.[24] Whereas Zeitlin and McNally reported higher TAS scores in patients with panic disorder as compared to patients with obsessive-compulsive disorder (OCD),[23] Bankier et al. reported the opposite (i.e. lower TAS scores in panic disorder than in OCD).[25]

However, there is limited evidence regarding the relationship between social anxiety disorder (SAD) and alexithymia. As far as we know, there are no studies reporting a detailed examination of the effects of alexithymia on patients with SAD, especially focusing on high major depression comorbidity. Cox and colleagues reported no significant difference in prevalence of alexithymia among patients with panic disorder or SAD (34% and 28.3%, respectively).[26] Another study also did not find a difference but reported higher rates: alexithymia was present in 54% of patients with panic disorder and in 58% of patients with SAD, both were significantly higher than reported 15% prevalence of alexithymia in healthy controls.[27]

Our hypothesis was that SAD would be associated with alexithymia and this association could not be explained by the presence of comorbid major depression. Therefore, the aims of our study are determining the frequency of alexithymia among patients who applied to an outpatient clinic for treatment of SAD, and then comparing alexithymic and non-alexithymic patients in terms of sociodemographic and clinical characteristics, comorbidity patterns and rating scale scores, and finally determining the independent variables associated with alexithymia in patients with SAD. We also aim to determine if alexithymia is primarily associated with SAD or can it be better explained as a consequence of high major depression comorbidity.

METHODS

A total of 140 patients with generalized type SAD from the outpatient psychiatric unit of Bahat Group Hospitals in Istanbul were interviewed by using the Structured Clinical Interview for DSM-

IV/Clinical Version (SCID-I/CV)[28] to confirm their diagnoses between November 2008 and June 2010. SAD was the primary presenting problem for all patients and none of the patients were using psychotropic medications for at least one month prior to their interviews. Patients with schizophrenia or related psychotic disorders or organic mental syndromes were excluded from the study. All patients gave informed consent to participate after receiving detailed information about the study procedure. This study adheres to the Declaration of Helsinki.

All patients with SAD were assessed with Toronto Alexithymia Scale-20 (TAS-20),[29,30] Liebowitz Social Anxiety Scale (LSAS),[31] Beck Depression Inventory (BDI),[32] Beck Anxiety Inventory (BAI)[33] and Global Assessment of Functioning Scale (GAF).

LSAS was used for assessing and rating the level of fear and avoidance that individuals have in social interaction and social performance situations.[31] The reliability and validity of the Turkish LSAS have been established.[34]

BDI and BAI were used to measure the severity of depression and anxiety symptoms, respectively. Psychometric properties of the Turkish versions of both BDI[35] and BAI[36] have been validated.

Alexithymia was assessed using the validated Turkish version of TAS-20.[37] Each TAS-20 item is rated on a 5-point (1 to 5) Likert-type scale, with total scores ranging from 20 to 100. The cut-off point for alexithymia was 61, which has been empirically established. Individuals whose TAS-20 scores equal to or higher than 61 were considered as alexithymic.

A semi-structured interview form developed by the investigators was used in order to determine the demographic and clinical characteristics of the participants.

Statistical analyses were performed by using the Statistical Package for Social Sciences (SPSS) version 11.0. The Fisher exact test/chi-square test was used to compare categorical variables. For continuous variables, a Kolmogorov-Smirnov z test was applied first. Independent samples t-test was used for the continous variables that showed a normal distribution and Mann-Whitney U test was used for the continous variables that did not show a normal distribution according to the Kolmogorov-Smirnov test.

Alexithymic and non-alexithymic groups were compared with regard to sociodemographic and clinical characteristics, comorbidity profiles and rating scale scores. Independent variables associated with the dependent variable -alexithymia- were investigated with binary logistic regression. In addition, Pearson's correlation was used to assess scale variables related with TAS total scores. p values <0.05 were considered as indicating statistical significance. Scheffe test was used for post hoc evaluations.

RESULTS

Forty-two of the patients were females (30.0%) and 98 patients were males (70.0%). Thirty-five patients were married (25.0%) whereas 102 patients were never married (72.9%) and three patients were divorced (2.1%). Forty-one patients were students (29.3%), 86 patients were working (61.4%), three patients were housewives (2.1%) and 10 patients were unemployed or unable to work due to distress associated with their disorders (7.1%). Some other demographical or clinical characteristics of the sample are given in Table 1.

Seventy-four patients (52.9%) had a history of previous psychiatric treatment and all of those patients had used at least one antidepressant medication for at least one month. Their mean duration of antidepressant use was 6.27 months.

Table 1. Some demographical or clinical characteristics of the study sample

	n	Range (min-max)	Mean±SD
Age	140	18-50	28.28±6.44
Education (years)	140	5-18	12.81±2.84
Age at first treatment contact	140	13-50	26.14±6.61
Age at SAD onset	140	6-36	14.50±5.43
Duration of SAD (years)	140	1-40	13.95±7.95
Age at first depressive episode	125	10-43	19.54±5.85

SAD: Social anxiety disorder, SD: Standard deviation

The remaining 66 patients (47.1%) were treatment-naive. Eight patients had a history of suicide attempts (5.7%).

Comorbid mood disorder was diagnosed in 125 (89.3%) of 140 patients. Eighty-five patients had a current unipolar major depressive episode and 18 patients who had a past history of major depressive disorder (MDD) without a current episode revealed a total of 103 patients with comorbid MDD (73.5%). Of 22 patients with a comorbid bipolar disorder, 18 patients developed a hypomanic episode while taking antidepressants and diagnosed with bipolar disorder not otherwise specified (BDNOS) (12.9%) and only four patients were diagnosed with bipolar II disorder (2.9%).

Major depressive episodes of patients with a history of mood disorder (unipolar or bipolar) were evaluated in terms of atypical, seasonal, psychotic features and chronicity according to DSM-IV.[38] Within the group of patients with a history of major depressive episode (n=125), episodes of 83 patients have been identified as predominantly displaying atypical features (66.4% of patients with depression and 59.3% of the whole study group). 'Seasonal affective disorder' in depressive episodes were noted in 47 of 125 patients (37.6%). There was only one patient who had a history of psychotic features among patients with comorbid depressive episodes and 13 patients were suffering from chronic depression (0.7% and 9.3% of the whole study population, respectively).

According to TAS-20, 46 patients scored ≥61 and were considered as alexithymic (32.9%). Sociodemographic characteristics of alexithymic group did not differ significantly from non-alexithymic group (Table 2). Mean educational level, age at onset of SAD, age at onset of first comorbid depressive episode, duration of SAD, mean duration of interval between onset of SAD and initial treatment contact did not differ between the two groups. Mean age at first treatment contact was lower in the alexithymic group than in the non-alexithymic group (p=0.049).

Number of patients who have received previous psychiatric treatment and exposed to antidepressant medications, mean duration of antidepressant use, number of patients who have a history of suicide attempts and who have displayed psychotic or chronic identifiers of depressive episodes did not show a statistically significant difference between alexithymic and non-alexithymic individuals. The mean number of depressive episodes in alexithymic group was significantly higher than in non-alexithymic group. Alexithymic group also had more frequent seasonal affective disorder and atypical depression compared to non-alexithymic group (Table 2).

The BDI, BAI, LSAS-fear, LSAS-avoidance and LSAS-total scores were significantly higher in the alexithymic patients than in the non-alexi-

Table 2. Comparison of demographic and clinical characteristics of alexithymic and non-alexithymic patients with SAD

	Alexithymia(+) (46)		Alexithymia(-) (94)			
	n	%	n	%	df/Chi-square	p
Sociodemographic features						
Age (mean)	27.00		28.90		138	NS
Marital status - single	35	76.1	67	71.3	2	NS
Gender - female	10	21.7	32	34.0	1	NS
Education (mean years)	12.17		13.11		1	NS
Clinical features						
Number of current comorbid psychiatric disorders (mean)	1.23	0.92	1	0.015		
Number of lifetime comorbid psychiatric disorders (mean)	1.67		1.25		1	0.009
Total number of depressive episodes (mean)	5.71		3.91		1	0.006
Seasonal mood disorder episodes	23	50.0	24	25.5	2	0.015
Atypical features in depressive episodes	35	76.1	48	51.1	2	0.019
Mean age at first treatment contact	24.56		26.90		138	0.049

Table 3. Comparison of rating scale scores of alexithymic and non-alexithymic participants

Rating scales (mean)	Alexithymia (+)	Alexithymia (-)	df	p
LSAS - fear	74.21	64.00	138	<0.001
LSAS - avoidance	69.97	61.35	138	<0.001
LSAS - total	144.19	125.24	138	<0.001
BDI	25.50	16.00	138	<0.001
BAI	28.39	19.77	138	<0.001
GAF - present year	61.52	67.44	1	<0.001
GAF - previous year	63.69	69.20	1	<0.001

LSAS: Liebowitz Social Anxiety Scale, BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, GAF: Global Assessment of Functioning

Table 4. Comparison of correlations between alexithymia and other rating scales before and after controlling for depression scores and other variables related to depression

Rating scales	When depression not controlled Sig. (2- tailed)	p	BDI controlled Sig. (2-tailed)	p	All depressive variables controlled Sig. (2-tailed)	p
LSAS-fear	0.477	<0.001	0.343	<0.001	0.279	0.002
LSAS-avoidance	0.475	<0.001	0.332	<0.001	0.236	0.009
LSAS-total	0.491	<0.001	0.354	<0.001	0.274	0.002
BDI	0.526	<0.001	-	-	-	-
BAI	0.433	<0.001	0.244	0.004	0.193	0.033
GAF-current	-0.426	<0.001	-0.195	0.021	-0.184	0.042
GAF-previous year	-0.438	<0.001	-0.260	0.002	-0.273	0.002

LSAS: Liebowitz Social Anxiety Scale, BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, GAF: Global Assessment of Functioning

thymic patients. Mean current and previous year GAF scores were significantly lower in the alexithymic group than in the non-alexithymic group (Table 3).

There were no significant differences between alexithymic and non-alexithymic patients in terms of comorbidity rates of any specific psychiatric disorder. However, total number of current and lifetime comorbid diagnoses were higher in the alexithymic group than in the non-alexithymic group (B=0.603, df=1, odds=1.828, p=0.019 and B=0.538, df=1, odds=1.712, p=0.012, respectively).

Presence of alexithymia was associated with higher scores on BDI (B=0.107, df=1, odds= 1.113, p<0.001), BAI (B=0.057, df=1, odds= 1.058, p<0.001), LSAS-fear (B=071, df=1, odds= 1.073, p<0.001), LSAS-avoidance (B=0.062, df=1, odds=1.064, p<0.001) and LSAS-total scales (B=0.035, df=1, odds=1.036, p<0.001) and with lower GAF-previous year scores (B=-0.077, df=1, odds=0.926, p<0.001).

Table 5. Comparison of TAS scores in patients with current/past/no history of major depressive episodes

Alexithymia score	Current MDE (n=107) Mean±SD	Past MDE (n=18) Mean±SD	No MDE (n=15) Mean±SD	F	p
TAS - total	57.1±9.8	49.4±9.7	49.4±13.3	7.18	0.001

(TAS: Toronto Alexithymia Scale; MDE: Major depressive episode; SD: Standard deviation)

Due to high mood disorders comorbidity in our sample, we also assessed whether alexithymia is specifically related to SAD or is it a feature that might be better explained by co-occurring major depression (Table 4). First, we calculated correlations between TAS total scores and other rating scale scores. Later, when we controlled for BDI scores, we have found that the relationships between TAS and LSAS, BAI and GAF scores have weakened in partial correlation analysis. When other related variables such as mean total number of depressive episodes and mean age at first depressive episodes are also controlled along with BDI scores, correlation of TAS with other rating scores has weakened even more (Table 4).

Since we found a weaker correlation between alexithymia and SAD after controlling for depression, we also compared the three groups of patients grouped according to the presence or absence of current or past major depressive episodes using ANOVA (Table 5). Post hoc assessment revealed higher mean TAS scores in patients with current comorbid major depressive episode than in patients with only a past history of major depressive episodes or in patients who never had a major depressive episode.

DISCUSSION

In the current study, alexithymia was associated with higher severity scores and comorbidity rates in patients with SAD. However, this association between SAD and alexithymia was mostly due to the high major depression comorbidity rate of our sample.

We have found that 32.9% of patients with SAD were alexithymic. Although this finding may be interpreted as comparable with the existing data,[26] there are some studies that reported a higher prevalence of alexithymia among patients with SAD.[27] Previous studies did not take into account whether there is an effect of alexithymia on core symptoms of SAD. In our study, fear and avoidance subscales and the total score of LSAS were higher in alexithymic patients than in non-alexithymic patients. Our results suggest that alexithymia may be associated with a more severe clinical presentation of SAD.

There were more participants in the non-alexithymic group who reported no lifetime major depressive episodes (unipolar or bipolar) than in the alexithymic group. Average total number of depressive episodes were also higher in the alexithymic group than in the non-alexithymic group. Although there is a paucity of data on SAD specifically, studies in general have established a clear relationship between alexithymia and depression.[4,12] This well-established relationship may also have important implications for our findings.

BDI scores were also significantly higher in the alexithymic group than in the non-alexityhmic patients with SAD. This association between alexithymia and presence and severity of depression is in line with the existing literature.[8,10,11] Our results may reflect that when alexithymia co-occur with SAD it may increase the frequency and severity of major depressive episodes.

Seasonal affective disorder and atypical depressive episodes were also more frequent in the alexithymic group than in the non-alexithymic patients. We are not aware of any studies reporting data on these aspects for patients with SAD. A common feature (i.e. interpersonal rejection sensitivity) may partly explain the relationship between SAD and atypical depression.

In our study, BAI scores were also significantly higher in SAD patients with alexithymia than in patients who were not alexithymic. Previously, a relationship between anxiety and alexithymia has been found in non-clinical[12,22] and depressed[8] samples. TAS scores were highly correlated with anxiety sensitivity in patients with panic disorder[23] and also in a non-clinical sample.[24] Our results from a large sample of SAD may be interpreted as providing additional evidence for the relationship between anxiety and alexithymia.

We also found lower mean GAF scores at the time of assessment and for the previous year in the alexithymic group than in the non-alexithymic group. Earlier, it was reported that depressed patients with alexithymia had lower GAF scores than nonalexithymic patients[8] and in a general population study, alexithymic participants' subjective work ability was more frequently decreased than that of the non-alexithymic subjects.[2] Our findings also suggest that alexithymia interferes with functional outcomes in general, but this may also be a consequence of the association between alexithymia and increased severity of SAD.

Alexithymic individuals with SAD had significantly higher mean number of comorbid psychiatric diagnoses for both current and lifetime comorbiddities than non-alexithymic participants in our study. It has been reported that depressed pa-

tients with alexithymia had more comorbid psychiatric diagnoses than depressed but non-alexithymic individuals.[9] Our findings suggest that this may also be the case for SAD as well.

The mean age at first treatment contact was lower in the alexithymia group than in the participants without alexithymia. We may speculate that alexithymia may shorten the duration from outset of the disorder to first contact with mental health services through its' association with a more severe form of SAD or higher comorbidity and/or severity of depression.

Our study has some limitations that need to be acknowledged. The first is the lack of a healthy control group. Second, we did not assess personality disorders, so a possible confounding effect of avoidant personality traits could not be ruled out. Third, most of the participants in our study had comorbid major depression which may make the interpretation of our results more difficult. Finally, our sample was consisted of patients who applied to a unit where most of the patients specifically presented for treatment of SAD. Therefore, our results may not be optimal for generalization to all patients with SAD.

In conclusion, our hypothesis was partly supported since we have found a relationship between alexithymia and SAD, but our results also demonstrated that this relationship is much stronger when there is comorbid major depression. Our results may suggest that although SAD is associated with alexithymia, this association may be primarily attributed to the high comorbidity of mood disorders. Another implication of our findings is that alexithymia may be related to current depression in SAD rather than being a trait characteristic of patients with or without a history of past major depressive episodes.

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