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Alexithymia and its relationships with anxiety and depression in eating disorders

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Abstract

The objective was to study alexithymia and its relationship with anxiety and depression in eating disorders (ED) in a Spanish sample. One hundred and fifty-one females with an eating disorder: 25 with anorexia nervosa, restricting subtype (ANR), 44 with anorexia nervosa, bulimic subtype (ANB), and 82 with bulimia nervosa (BN) [according to criteria from DSM-IV (American Psychiatric Association, 1994)], and a control group of 43 females, were assessed with the Toronto Alexithymia Scale (TAS-20), the Beck Depression Inventory (BDI) and the Self-Rating Anxiety Scale (SAS). Patients with ED present higher rates of alexithymia than controls, but after controlling for anxiety and depression the differences among groups disappear. Depression and anxiety predicted and correlated positively with alexithymia. Our findings are consistent with previous studies, and suggest that alexithymia is closely related to anxiety and depression, and could be a trait or a state in patients with ED.

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1. Introduction

Nemiah, Freiberg, and Sifneos (1977) defined the construct alexithymia as follows: (1) difficulty identifying and describing subjective feelings; (2) difficulty distinguishing between feelings and the bodily sensations of emotional arousal; (3) lack of fantasy; and (4) an externally oriented

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cognitive style. Nowadays, alexithymia is conceptualised as a deficit in the cognitive-experiential component of emotions response systems (subjective awareness and verbal reporting of feelings), and in the interpersonal regulation of emotions. Several authors have attributed alexithymia to the slowing of the affect development during early childhood (Taylor, 2000).

Alexithymia has been found in many different pathologies such as somatoform disorders, alcoholism, drug addiction, posttraumatic stress, asthma, depression, eating disorders, but, as Taylor (2000) suggested, more prospective studies are required to establish a causality direction. Bruch (1962, 1973, 1982) suggested that the difficulty to distinguish and describe feelings is the main deficit in eating disorders (ED), related to a sense of general inadequacy and a lack of control over one's life. Following Bruch's suggestions, Taylor, Bagby, and Parker (1997) conceptualised ED as affect regulation disorders. Using the Toronto Alexithymia Scale (TAS) (Bagby, Parker, & Taylor, 1994) in its different versions, empirical studies reported alexithymia rates ranging from 22.9 to 77.1% for patients with anorexia nervosa and from 32.3 to 56% for patients with bulimia nervosa (Bourke, Taylor, Parker, & Bagby, 1992; Cochrane, Brewerton, Wilson, & Hodges, 1993; Corcos et al., 2000; De Groot, Rodin, & Olmsted, 1995; Jimerson, Wolfe, Franko, Covino, & Sifneos, 1994; Rastam, Gillberg, Gillberg & Johansson, 1997; Schmidt, Jiwany, & Treasure, 1993; Taylor, Parker, Bagby, & Bourke, 1996). The percentages found in patients and controls (range 3.3–27) are not reliable due to the different TAS versions and cut-off scores used.

Taylor et al. (1996) stated that in eating disorders a deficit on the cognitive processing of emotions appears, but not on the operational cognitive style, suggesting that the lack of close relationships of anorexic patients could be due to alexithymia. Alexithymia is associated with interpersonal distrust, ineffectiveness, and lack of interoceptive awareness in ED, but it is not related to drive for thinness and body dissatisfaction. On the other hand, starvation, hyperactivity, bingeing and vomiting, could be attempts to regulate distressing and undifferentiated emotional states in these patients (Taylor et al., 1997).

Numerous reports reveal the existence of a relationship between alexithymia, depression and anxiety. Hendryx, Haviland, and Shaw (1991) suggested that alexithymia is a multidimensional feature. They also reported that some dimensions correspond to a state, specially the difficulty to identify and to describe feelings, because they are related to a generalized anxiety response or stress in which depression would be a manifestation. These authors proposed that alexithymia could be an attempt to blockade negative emotions associated with stress. Pandey and Mandal (1996) suggested that the association between alexithymia and overestimated perceived arousal might be due to the association between alexithymia and anxiety. Jacob and Hautekeete (1999) found that alexithymia was related to low affective intensity, and suggested that it was an effect of lesser interest in emotions. However, if depression and anxiety were controlled, the relation between alexithymia and enhanced affective intensity disappeared. Honkalampi, Hintikka, Saarinen, Lehtonen, and Viinamäki (2000) and Honkalampi, Koivumaa-Honkanen, Takanen, Hintikka, Lehtonen, and Viinamäki (2001) found that alexithymia, in depressed patients, was a state that was dependent on and strongly related to depression. Several authors note that alexithymia is a personality trait that could favour anxiety and depression (Martínez-Sánchez, Ato-García, Córcoles, Huedo, & Selva, 1998; Parker, Bagby, & Taylor, 1991; Taylor, 2000; Wise, Mann, & Shay, 1992). Other authors argue that alexithymia could be considered as a state due to distress and depressive mood (Corcos et al., 2000). Finally, other authors outline that alexithymia can be

either a state or a trait (Cochrane et al., 1993; Jimerson, et al., 1994; Sexton, Sunday, Hurt, & Halmi, 1998). Nevertheless, it is not clear which of these three hypotheses is closer to the truth: (1) alexithymia as a state could be caused by depression and anxiety as an answer to stress, (2) alexithymia as a trait could favour anxiety and depression development due to the difficulty of managing emotions, and (3) depending on the patients, alexithymia could also be conceptualised as a trait or as a state.

It would be necessary to study alexithymia controlling anxiety and depression in order to find an answer to the unsolved question of alexithymia as a state or a trait in ED. There are few studies about this question: De Groot et al. (1995) controlling for depression, found differences in total TAS (26-item version) and in the factor Difficulty in Identifying Feelings, when comparing bulimic patients and controls. Sexton et al. (1998) also controlled for depression and used the TAS-26, and they found that the factor Difficulty in Identifying Feelings was more associated with the clinical state of depression in ED, as already suggested by Parker et al. (1991) and De Groot et al. (1995). The factor Difficulty in Expressing Feelings did not change when there was a decrease of depression in restrictive anorexics, and it was also associated with personality disorders. They concluded that difficulty in describing feelings was a trait in these patients, and that difficulty in identifying feelings was a state. Corcos et al. (2000) confirmed that alexithymia had an increased prevalence in eating disorders, but its occurrence could not be interpreted without taking depression into account. They also reported that increased rates of alexithymia in anorexic patients, compared to bulimic patients, seemed to be more closely related to depression than to an increased alexithymic way of functioning itself.

Jimerson et al. (1994), using the TAS-26, and controlling anxiety and depression, compared controls and bulimics free of major depression and they found differences between both groups in their difficulty to identify feelings. They suggested that alexithymia, as it is associated with low self-esteem and insecurity, could be enhancing anxiety and depression in bulimic patients, and that it might be secondary to concurrent depression in certain patients.

Studies that use the TAS-20 and control anxiety and depression in all the three cited subtypes of ED are non-existent, so there is no evidence that shows that alexithymia in ED is a personality trait which occurs independently of these symptoms. The aim of this study was to examine the prevalence of alexithymia and its relationship with anxiety and depression in three eating disorder subtypes and a control group.

2. Method

2.1. Subjects

The sample consisted of 151 females with an eating disorder who were referred to us by the Association Against Anorexia and Bulimia of Euskadi (ACABE). The criteria followed to select the sample were: diagnosis of eating disorder as outlined in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), age between 14 and 33 and a minimum illness duration of six months. The exclusion criteria were: to be currently receiving psychotherapeutic treatment and/or to require hospitalization. The sample was distributed as follows: 25 suffering from anorexia nervosa, restricting subtype (ANR), 44 anorexia nervosa patients, bulimic subtype (ANB) and 82 with a purgative bulimia nervosa

diagnosis (BN). Control group was recruited from the general population. Both patient groups and control group were homogenous as far as sociodemographic characteristics are concerned (sex, age, environment and studies). The control group included 43 women, excluding Health Sciences and Psychology students and professionals. In the overall sample ($N=194$), most came from an urban environment (92.03%), were single (90.03%) and students (80.2%). Some of these students (40.1%) were studying at high school and others at university (30.9%). The inclusion criteria for this group were: not to have purgative behaviours, binges or diets, and to score less than 6 on the General Health Questionnaire-28 (Goldberg & Hillier, 1979), less than 30 on the Eating Attitudes Test (Garner & Garfinkel, 1979), less than 7 on the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and less than 36 on the Self-Rating Anxiety Scale (SAS) (Zung, 1971). The characteristics of the sample are displayed in Table 1.

2.2. Materials

Sociodemographic variables were gathered with an ad-hoc scale:

- The Eating Attitudes Test (EAT) (Garner & Garfinkel, 1979), a 40-item self-report questionnaire that evaluates attitudes, feelings and concerns related to food, weight and exercise. Scores under 30 are considered to represent normality.
- The Toronto Alexithymia Scale (TAS-20), a 20-item self-report scale that has three factors (Bagby et al., 1994; Martínez-Sánchez, 1996): F1, difficulty in identifying feelings; F2, difficulty in describing feelings to others, and F3, externally orientated thinking. The empirically derived TAS-20 cut-off score of ≥ 61 was used (Taylor et al., 1996). The validated Spanish version was used (Martínez-Sánchez, 1996).
- General Health Questionnaire (GHQ-28) (Goldberg & Hillier, 1979), a 28-item self-report that is designed to assess the general mental health state.
- The Beck Depression Inventory (BDI) (Beck et al., 1961), a 21-item self-report questionnaire.
- The Self-Rating Anxiety Scale (SAS) (Zung, 1971), a 20-item self-report questionnaire with statements on a four-point scale of severity.

Table 1
Characteristics of the subjects by groups

	Restricting anorexia nervosa ($n=25$)		Bulimic anorexia ($n=44$)		Bulimia nervosa ($n=82$)		Control ($n=43$)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
AGE	21.08	7.39	20.77	4.74	23.01	5.35	21.51	5.97
AGE at onset	16.71	3.03	16.91	3.77	17.89	5.27		
Duration of illness (months)	46.80	53.30	41.66	40.16	58.72	48.33		
BMI	16.96	1.13	17.02	0.99	22.19	3.44	22.30	2.36
EAT	58.60	16.04	60.89	16.43	50.80	14.18	8.21	5.79

BMI, Body Mass Index; EAT, Eating Attitude Test.

2.3. Procedure

2.3.1. Assessment

Patients were consecutively evaluated as they were referred to us by ACABE. Four clinical psychologists, trained in the administration of the assessment measures, evaluated the patients to gather information about the history of the illness, weight and height. Afterwards, they administered the scales of symptoms and made a diagnosis according to the criteria of the DSM-IV (APA, 1994). Information about sociodemographic and clinical variables and the case history were also gathered from the parents. Experimental and comparison groups were adequately matched for sociodemographic characteristics. The statistical analyses were performed with the Statistical Package for the Social Sciences (SPSS) V. 10.

3. Results

The TAS-20 demonstrated acceptable internal consistency (Cronbach's alpha coefficient = 0.82) with the total sample and with regard to factors: F1, $\alpha = 0.79$; F2, $\alpha = 0.73$, and F3, $\alpha = 0.65$. These values are similar to the ones found by Martínez-Sánchez (1996) and the ones mentioned by the authors of the instrument (Bagby et al., 1994). On the other hand, the EAT Cronbach's alpha coefficient of the overall sample was $\alpha = 0.94$.

3.1. Correlations

Correlations were performed in order to evaluate the relationships among TAS-20, its factors, and other variables. In the total sample ($N = 194$), results show that TAS-20 and its factors correlate positively among themselves and with the SAS and the BDI. In the ED subjects ($n = 151$) the correlations between TAS-20, its factors, SAS, BDI and EAT were studied and we found positive correlations among all variables except between F3 and SAS (see Table 2). When controlling for anxiety and depression, the relationship between EAT and TAS-20 disappeared.

Table 2
Correlations among TAS-20, its factors, SAS, BDI, EAT and BMI in eating disorders patients ($n = 151$)

	TAS-20	F1	F2	F3	BDI	SAS	EAT
F1	0.781**						
F2	0.790**	0.478**					
F3	0.714**	0.261**	0.377**				
BDI	0.511**	0.514**	0.417**	0.230**			
SAS	0.419**	0.498**	0.348**	0.103	0.573**		
EAT	0.246**	0.179*	0.231**	0.163*	0.365**	0.219**	
BMI	-0.211**	-0.132	-0.153	-0.199*	-0.157	-0.102	-0.314**

TAS-20, Toronto Alexithymia Scale-20; F1, factor 1; F2, factor 2; F3, factor 3; BDI, Beck Depression inventory; SAS, Self-Rating Anxiety Scale; EAT, Eating Attitude Test; BMI, Body Mass Index.

* $P < 0.05$; ** $P < 0.01$.

3.2. Effect by diagnosis

The Chi-square test was used to study the rate of alexithymia in the four groups using the TAS-20 cut-off score of ≥ 61 , which was already proposed by Taylor et al. (1996) as the most conservative one. Statistically significant differences were found among groups ($\chi^2=42.750$, $df=3$, $P<0.0001$). Pairwise group comparisons were also performed using Bonferroni correction. Alpha level was set at $P=0.0083$ ($0.05/6$), finding significant differences between the control group and each of the groups with an ED ($P<0.0001$) with a higher rate of alexithymia in the ED groups, [ANR (56%), ANB (68.2%), BN (47%), Control group (2.3%)].

A multivariate analysis of variance (MANOVA) was performed on the TAS-20, F1, F2, and F3 to compare the four groups in continuous variables. There was a main effect of group [Wilks' Lambda = 0.045, $F(4,187)=994.175$, $P<0.0001$]. Univariate analyses of variance showed a main effect of group on TAS-20, its factors, SAS, and BDI (see Table 3). Multiple comparisons using the Bonferroni "post hoc" test showed significant differences between control and ED groups on all the variables ($P<0.0001$). Significant differences were also found on F1 between groups ANB and BN ($P=0.038$), ANB and ANR ($P=0.048$) as well as on F3 between groups ANB and BN ($P=0.011$). On the other hand, there were also differences on BDI between groups ANR and ANB ($P<0.0001$), and between groups ANB and BN ($P=0.001$).

In order to control the effects of anxiety and depression on TAS-20, analyses of covariance (ANCOVA) were performed examining the differences among the groups on the TAS-20 and its factors, and considering BDI and SAS as concomitant variables. We controlled for the BDI and we only found statistically significant differences on F1 between the control group as opposed to the ANB and BN groups [$B=0.321$, $t(189)=6.961$, $P<0.0001$, $\eta^2=0.204$]. When we controlled for SAS, we found statistically significant differences on TAS-20 [$B=0.597$, $t(189)=5.873$, $P<0.0001$, $\eta^2=0.154$] and F2 [$B=0.205$, $t(189)=5.029$, $P<0.0001$, $\eta^2=0.118$] in the control group as opposed to the others (ANR, ANB and BN), and on F1 in the control group as opposed to ANB and BN ones [$B=0.321$, $t(189)=6.961$, $P<0.0001$, $\eta^2=0.204$]. But, when we controlled for SAS and BDI co-ordinately, there were no significant differences among the groups on the TAS-20 and its factors.

In order to study if patients without depression or anxiety were more alexithymic than controls, we compared the 48 patients without clinical depression ($BDI \leq 19$, following De Groot et al., 1995) or anxiety ($SAS \leq 44$) with the 43 controls in TAS-20 and its factors. We found that the ED patients had total TAS-20, F1 and F2 scores higher than controls (see Table 4). Regarding alexithymia rates, 15 (31.3%) ED patients were alexithymics ($TAS-20 \geq 61$) vs. 1 (2.3%) control ($\chi^2=13.095$, $df=1$, $P<0.0001$).

3.3. Prediction of alexithymia in ED patients

A series of stepwise multiple regression analyses were run attempting to predict TAS-20 score and its factors based on the independent variables of SAS and BDI. The results showed that the SAS and the BDI have a positive influence on TAS-20, F1, and F2 but not on F3. The proportion of the explained variance by the independent variables in the regression model was 27.5% for the total TAS-20, and 31.7% for F1 (difficulty in identifying feelings). The BDI predicted F2 and F3: 16.9% of F2 (difficulty in expressing feelings) and 4.6% of F3 (externally orientated thinking)

Table 3
Comparisons among the four groups on the TAS-20, its factors, SAS, and BDI

	<i>N</i>	Mean	S.D.	df	<i>F</i>	<i>P</i>
<i>TAS-20</i>						
ANR	25	60.08	11.42			
ANB	44	65.57	11.01			
BN	82	59.07	12.90			
Control	43	42.44	8.74			
Total	194	56.99	14.02	3	32.726	0.000
<i>F1</i>						
ANR	25	22.5200	6.2458			
ANB	44	26.2727	4.8530			
BN	82	23.5488	6.1427			
Control	43	14.0233	3.8016			
Total	194	21.9227	6.9617	3	42.223	0.000
<i>F2</i>						
ANR	25	17.4000	4.1633			
ANB	44	18.3409	4.8077			
BN	82	16.9512	5.1085			
Control	43	10.9767	2.8825			
Total	194	16.0000	5.2512	3	23.702	0.000
<i>F3</i>						
ANR	25	20.1600	5.8856			
ANB	44	20.9545	4.9601			
BN	82	18.5366	5.4347			
Control	43	17.4419	4.5056			
Total	194	19.0515	5.3176	3	3.987	0.009
<i>SAS</i>						
ANR	25	42.00	7.80			
ANB	44	46.14	8.08			
BN	82	43.56	8.72			
Control	43	30.00	3.18			
Total	194	40.94	9.60	3	40.422	0.000
<i>BDI</i>						
ANR	25	19.40	8.83			
ANB	44	27.20	8.13			
BN	82	21.56	8.78			
Control	43	2.98	1.96			
Total	194	18.44	11.52	3	82.473	0.000

TAS-20, Toronto Alexithymia Scale-20; F1, factor 1; F2, factor 2; F3, factor 3; BDI, Beck Depression Inventory; SAS, Self-Rating Anxiety Scale; ANR, Restrictive Anorexia Nervosa; ANB, Bulimic Anorexia Nervosa; BN, Bulimia Nervosa.

score variance could be explained (see Table 5). Finally, we consider that it is important to show that in ED patients, 18.1% of alexithymics did not present anxiety or depression, while 14.7% of non-alexithymics presented anxiety and depression, 13.2% anxiety, and 23.5% depression.

Table 4

Comparison in TAS-20 and its factors between eating disorders patients without clinical depression ($BDI \leq 19$) or anxiety ($SAS \leq 44$) and controls ($n = 91$)

Group	<i>N</i>	Mean	S.D.	<i>t</i>	df	<i>P</i>
<i>TAS-20</i>						
Eating disorder	48	53.69	12.05			
Control	43	42.44	8.74	5.133	85.435	0.000
<i>F1</i>						
Eating disorder	48	20.39	6.09			
Control	43	14.02	3.80	6.047	79.818	0.000
<i>F2</i>						
Eating disorder	48	15.22	4.70			
Control	43	10.97	2.88	5.260	79.136	0.000
<i>F3</i>						
Eating disorder	48	18.00	5.48			
Control	43	17.44	4.50	0.527	89	0.600

TAS-20, Toronto Alexithymia Scale-20; F1, factor 1; F2, factor 2; F3, factor 3.

Table 5

Multiple-regression analyses between TAS-20 dimensions, Beck Depression Inventory (BDI) and Self-Rating Anxiety Scale (SAS)

	TAS-20 total score	Difficulty identifying feelings	Difficulty expressing feelings	Externally orientated thinking
ANOVA	$F = 29.480$ df = 2 $P < 0.001$	$F = 35.751$ df = 2 $P < 0.001$	$F = 31.421$ df = 1 $P < 0.001$	$F = 8.299$ df = 1 $P = 0.005$
Adjusted R^2	0.275	0.317	0.169	0.046
BDI	0.403***	0.340***	0.417***	0.230**
SAS	0.188*	0.303***		

Results are presented as standardised regression coefficients β .

* $P < 0.05$; ** $P < 0.01$ *** $P < 0.001$.

4. Discussion

In the present study, the rates of alexithymia in ANR were similar to ones reported by Schmidt et al. (1993) and lower than ones found by Cochrane et al. (1993). In ANB we found higher rates than Cochrane et al. (1993) and Schmidt et al. (1993), and similar to other studies about anorexia that did not distinguish subtypes (Bourke et al., 1992; Parker et al., 1996). Alexithymia rates in

BN were similar to ones reported by Schmidt et al. (1993), higher than the results found in another study (Corcos et al., 2000), but lower than the rates reported by other researchers (Cochrane et al., 1993; De Groot et al., 1995). As we already suggested at the beginning of this report, the different versions and cut-off scores used could be enhancing those differences. Anyway, our results confirm previous findings about the high prevalence of alexithymia in patients with ED. The higher statistically significant rates of alexithymia in patients with ANB in comparison to bulimics can also be emphasized. Schmidt et al. (1993) and Corcos et al. (2000) found similar results comparing bulimics and anorexics (not distinguishing subtypes).

Positive correlations between the TAS-20 and its factors, as well as the consistence found, support the validity of the instrument in order to evaluate alexithymia in ED. Positive correlations with SAS and the BDI confirm previous findings (Cochrane et al., 1993; Corcos et al., 2000; Sexton et al., 1998; Wise et al., 1992) and reassert the association between alexithymia, anxiety and depression. The relationships with EAT disappeared if anxiety and depression were controlled. These results suggest that alexithymia in ED is more related to mood disorder, than to eating behavior.

Comparisons among groups showed differences, but once we controlled BDI, we only found differences on F1 (difficulty in identifying feelings) between controls, if we compare them to patients with ANB and BN. Taylor et al. (1996) reported that F1 made the greatest contribution to the discrimination of the groups, but they did not control depression. De Groot et al. (1995) controlled for depression and found differences in F1 between BN and control groups. In contrast, Sexton et al. (1998) only found differences between ANR and controls on F2 (difficulty in expressing feelings). When SAS was controlled, we found differences between controls and the three groups with ED on the TAS-20, F1 and F2. These results suggest that alexithymia is more related to depression than to anxiety in eating disorders.

Nevertheless, controlling SAS and BDI at the same time, no differences were found between groups on the TAS-20 and its factors. These findings suggest that alexithymia in ED could be a state due to depression and anxiety, as Corcos et al. (2000) have already affirmed. They have also suggested that it could be an attempt to blockade negative emotions associated with stress in different pathologies, as suggested by Hendryx et al. (1991). Jacob and Hautekeete (1999) found that the decreased interest in emotions shown by the alexithymics was an effect of depression and anxiety. But the findings that ED patients without clinical depression or anxiety presented higher scores on TAS-20, F1 and F2, and were more alexithymic than controls, suggest that alexithymia is a characteristic of eating disorders, in some cases independent of clinical depression or anxiety. Taylor et al. (1996) also found higher scores on TAS-20, F1 and F2 in ED patients vs. controls although they did not control depression or anxiety.

Our regressions showed that the level of depression, joined to anxiety, was the most predictive variable for the total TAS-20 and its factors, specially for total TAS-20 and F1, suggesting that depression may underlie patients' difficulties to identify feelings, as other authors have already noted (Parker et al., 1991; Sexton et al., 1998). The degree of explained variance by the BDI in the regression model for the total TAS-20 score (27.5%) was higher than the percentage shown by Sexton et al. (1998) in ED patients (21.9%) and Honkalampi et al. (2000) in depressed patients (20%). This also gives support for considering alexithymia as a state in ED, especially F1. On the other hand, Sexton et al. (1998) found that F2 was related to the presence of personality disorders, and they suggested that the difficulty to describe feelings could be a trait in ED. Our

results showed that BDI was the only predictor for F2 and F3, but the percentage of predicted variance was low. They also suggested that these factors could be related to other personality variables, as Wise et al. (1992) had already found in psychiatric outpatients.

Alexithymia and eating disorders are both strongly related to depression and anxiety, but our findings about ED patients with anxiety and depression not presenting alexithymia, and subjects with alexithymia not suffering from anxiety or depression, added to our results, allow us to suggest that alexithymia is a personality trait in some patients with ED, whereas in other cases alexithymia could be secondary to depression and anxiety, as certain authors have already suggested (Cochrane et al., 1993; Jimerson et al., 1994; Sexton et al., 1998). It would be interesting to know in which patients that suffer from ED, alexithymia could be considered as a primary or a secondary trait. Future research using longitudinal designs with a wider battery of instruments to evaluate psychopathology could help to clarify all these questions and to detect primary and secondary alexithymia in eating disorders.

On the therapeutic level, it may be convenient to evaluate alexithymia, anxiety and depression, and to explore if alexithymia precedes ED. The differentiation of cases with primary and secondary alexithymia would be very important because cognitive therapies could be more indicated than dynamic ones on primary alexithymia, as suggested by Jimerson et al. (1994) and Sexton et al. (1998) among others, whereas the secondary one could be modified with a wider range of therapies.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: author.
- Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia Scale-I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research*, 38(1), 23–32.
- Beck, A. T., Ward, C. M., Mendelson, M., Mock, J. E., & Erbaugh, J. K. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561–571.
- Bourke, M. P., Taylor, G. J., Parker, J. D., & Bagby, R. M. (1992). Alexithymia in women with anorexia nervosa: a preliminary investigation. *British Journal of Psychiatry*, 161, 240–243.
- Bruch, H. (1962). Perceptual and conceptual disturbances in anorexia nervosa. *Psychosomatic Medicine*, 24, 187–194.
- Bruch, H. (1973). *Eating disorders. Obesity, anorexia nervosa, and the person within*. New York: Basic Books.
- Bruch, H. (1982). Anorexia Nervosa: therapy and theory. *American Journal of Psychiatry*, 139, 1531–1538.
- Cochrane, C. E., Brewerton, T. D., Wilson, D. B., & Hodges, E. L. (1993). Alexithymia in the eating disorders. *International Journal of Eating Disorders*, 14, 219–222.
- Corcos, M., Guilbaud, O., Speranza, M., Paterniti, S., Loas, G., Stephan, P., & Jeammet, P. (2000). Alexithymia and depression in eating disorders. *Psychiatry Research*, 93, 263–266.
- De Groot, J. M., Rodin, G., & Olmsted, M. P. (1995). Alexithymia, depression and treatment outcome in bulimia nervosa. *Comprehensive Psychiatry*, 36(1), 53–60.
- Garner, D. M., & Garfinkel, P. E. (1979). The eating attitudes test: an index of the symptoms of anorexia nervosa. *Psychological Medicine*, 9, 273–279.
- Goldberg, D., & Hillier, V. F. (1979). A scaled version of the general health questionnaire. *Psychological Medicine*, 9, 139–145.
- Hendryx, M. S., Haviland, M. G., & Shaw, D. G. (1991). Dimensions of alexithymia and their relationships to anxiety and depression. *Journal of Personality Assessment*, 56(2), 227–237.
- Honkalampi, K., Hintikka, J., Saarinen, P., Lehtonen, J., & Viinamäki, H. (2000). Is alexithymia a permanent feature in depressed patients? Results from a 6-month follow-up study. *Psychotherapy and Psychosomatics*, 69, 303–308.

- Honkalampi, K., Koivumaa-Honkanen, H., Tanskanen, A., Hintikka, J., Lehtonen, J., & Viinamäki, H. (2001). Why do alexithymic features appear to be stable? A 12-month follow-up study of a general population. *Psychotherapy and Psychosomatics*, 70, 247–253.
- Jacob, S., & Hautekeete, M. (1999). Alexithymia is associated with a low self-estimated affective intensity. *Personality and Individual Differences*, 27, 125–133.
- Jimerson, D. C., Wolfe, B. E., Franko, D. L., Covino, N. A., & Sifneos, P. E. (1994). Alexithymia ratings in bulimia nervosa: clinical correlates. *Psychosomatic Medicine*, 56, 90–93.
- Martínez-Sánchez, F. (1996). Adaptación española de la Escala de Alexitimia de Toronto (TAS-20). *Clínica y Salud*, 7(1), 19–32.
- Martínez-Sánchez, F., Ato-García, M., Córcoles, E., Huedo, T., & Selva, J. (1998). Stability in alexithymia levels: a longitudinal analysis on various emotional answers. *Personality and Individual Differences*, 24(6), 767–772.
- Nemiah, J. C., Freiberger, H., & Sifneos, P. E. (1977). Alexithymia: a view of the psychosomatic process. In O. W. Hill (Ed.), *Modern trends in psychosomatic medicine. Volume 3* (pp. 340–349). London: Butterworths.
- Pandey, R., & Mandal, M. K. (1996). Eysenckian personality dimensions and alexithymia: examining the overlap in terms of perceived autonomic arousal. *Personality and Individual Differences*, 20(4), 499–504.
- Parker, J. D., Bagby, R. M., & Taylor, G. J. (1991). Alexithymia and depression: distinct or overlapping constructs? *Comprehensive Psychiatry*, 32, 387–394.
- Rastam, M., Gillberg, C., Gillberg, I. C., & Johansson, M. (1997). Alexithymia in anorexia nervosa: a controlled study using the 20-item Toronto Alexithymia Scale. *Acta Psychiatrica Scandinavica*, 95, 385–388.
- Schmidt, U., Jiwany, A., & Treasure, J. (1993). A controlled study of alexithymia in eating disorders. *Comprehensive Psychiatry*, 34, 54–58.
- Sexton, M. C., Sunday, S. R., Hurt, S., & Halmi, K. A. (1998). The relationship between alexithymia, depression, and axis II psychopathology in eating disorder inpatients. *International Journal of Eating Disorders*, 23, 277–286.
- Taylor, G. J. (2000). Recent developments in alexithymia theory and research. *Canadian Journal of Psychiatry*, 45(2), 134–142.
- Taylor, G. J., Parker, J. D. A., Bagby, R. M., & Bourke, M. P. (1996). Relationships between alexithymia and psychological characteristics associated with eating disorders. *Journal of Psychosomatic Research*, 41(6), 561–568.
- Taylor, G. J., Bagby, R. M., & Parker, J. D. A. (1997). *Disorders of affect regulation: alexithymia in medical and psychiatric illness*. Cambridge: Cambridge University Press.
- Wise, T. N., Mann, L. S., & Shay, L. (1992). Alexithymia and the Five-Factor Model of Personality. *Comprehensive Psychiatry*, 33(3), 147–151.
- Zung, W. W. (1971). A rating instrument for anxiety disorders. *Psychosomatics*, 12(6), 371–379.