



The Effects of Alexithymia on Self-Reflection and Insight in Major Depressive Disorder

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Abstract

Aim: We hypothesized that alexithymic depressive patients have low insight, which correlates with more severe depression and anxiety. In this context, we aimed to explore the correlation between insight and self-reflective abilities, alexithymia, as well as the presence and severity of major depression, which is the most diagnosed psychiatric disease in the world.

Methods: We accepted 80 patients diagnosed with major depression who were in outpatient care at our psychiatry clinic between September and December 2020, along with 80 healthy controls. We applied the Toronto Alexithymia Scale (TAS-20), Hamilton Anxiety Rating Scale, Hamilton Depression Rating Scale, and Self-Reflection and Insight Scale (SRIS) to all participants. This study was designed as a cross-sectional observational study.

Results: SRIS-insight score was found to be lower ($p<0.001$) in the patient group; higher scores were observed for difficulty in identifying feelings, difficulty in describing feelings, and the TAS-20 total score ($p<0.001$). TAS-20-total and subscales were found to be predicted by SRIS-insight in both groups ($p<0.001$; $p<0.01$).

Conclusion: When clinicians evaluate alexithymic patients with major depression, they need to consider this alongside symptom evaluation, as these patients may have low insight.

Keywords: Depressive disorder, alexithymia, anxiety, consciousness

Introduction

Major depression is a psychiatric disorder that impacts various aspects of life, including sleep, appetite, psychomotor activity, and sexuality (1). In Turkey, it ranks as the third most prevalent cause of disability (2). According to Taylor et al. (3), alexithymic traits involve difficulties in identifying and articulating emotions, trouble distinguishing between physical sensations and feelings of emotional arousal, limited imagination characterized by externally oriented cognition, and a lack of fantasy. Self-reflection, self-regulation, and insight involve establishing objectives, formulating strategies, implementing actions, evaluating progress, and deriving insights through comparison with the situations of others, as suggested by Grant et al. (4). Insight is not merely an understanding

of the illness but a continuous process of awareness and comprehension of how the disease affects a person's interactions with the world (5). Early diagnosis and treatment of depression are crucial, especially to prevent disability and cognitive impairment. Studies have shown that recurrence rates are higher in depressive disorders where insight is low (6). Additionally, research has indicated that the presence and severity of depression negatively impact cognitive functions even during the first untreated depressive episode (7). Given these considerations, it is vital for clinicians to diagnose major depressive disorders early. Exploring how personality traits, such as alexithymia, self-reflection, and insight-key topics of our research-affect depression may provide valuable insights. We hypothesized that alexithymic depressive patients have low insight, which correlates with more severe depression and anxiety.

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Our study aimed to explore the correlation between the severity of alexithymia and the levels of self-reflection and insight among patients diagnosed with major depression. We sought to uncover associations between patients' depressive symptoms, anxiety levels, alexithymia severity, characteristics, insight, and self-reflection abilities.

Methods

Compliance with Ethical Standards

This study was approved by the Clinical Research Ethics Committee of University of Health Sciences Turkey, Haydarpasa Numune Training and Research Hospital (approval no.: 2020/KK/184, dated 31.08.2020). All participants provided informed consent.

Study Design

This study followed a cross-sectional observational design and commenced after receiving ethics committee approval. Figure 1 displays the study flowchart. Between September and December 2020, we conducted a study with 80 patients diagnosed with major depressive disorder, aged 18 to 65, randomly selected from the psychiatry outpatient clinic. The control group consisted of 80 individuals within the same age, education, and socio-economic range, confirmed to have no psychiatric diagnoses through the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders-V (DSM-V) (SCID-V).

Both groups completed the Sociodemographic and Clinical Data Form, Toronto Alexithymia Scale (TAS-

20), Hamilton Anxiety Rating Scale (HAMA), Hamilton Depression Rating Scale (HAMD), and Self-Reflection and Insight Scale (SRIS).

Structured Clinical Interview for DSM-V

The Structured Clinical Interview for DSM-V (SCID-V), consisting of 10 modules and 32 diagnostic categories, is a clinician-administered scale used to assess a wide range of psychopathologies. These include psychotic disorders, mood disorders, substance use disorders, anxiety disorders, obsessive-compulsive spectrum disorders, post-traumatic stress disorder, and more (8).

Hamilton Depression Rating Scale

Developed by Hamilton, the Hamilton Depression Rating Scale (HAMD) has been widely used for over five decades to evaluate the severity of depressive symptoms. Scores range from 0 to 51, with higher scores indicating greater severity. Akdemir et al. (9) validated and adapted the scale for the Turkish population.

Hamilton Anxiety Rating Scale

The Hamilton Anxiety Rating Scale (HAMA) measures the severity of anxiety symptoms. Scores of 0-5 indicate no anxiety, 6-14 indicate mild anxiety, and 15 or more reflect significant anxiety. Yazıcı et al. (10) conducted a validity and reliability study for the Turkish version.

Toronto Alexithymia Scale

The Toronto Alexithymia Scale (TAS-20) is a 20-item scale that assesses alexithymia across three subscales: "externally oriented thinking", "difficulty describing

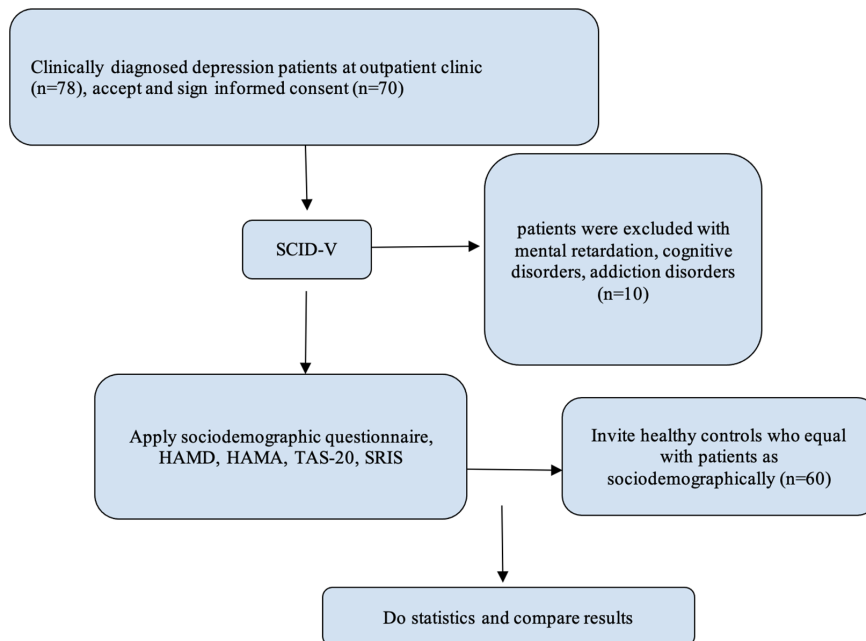


Figure 1. Our study's flow chart
SCID-V: Structured clinical interview for DSM-5

feelings”, and “difficulty identifying feelings”. Responses range from 1 to 5, with higher scores indicating greater alexithymia. The Turkish validity and reliability study was conducted for TAS-20 (11).

Self-Reflection and Insight Scale

The Self-Reflection and Insight Scale (SRIS) consists of 20 items assessing two subdimensions: insight and self-reflection. Six items measure self-reflection, while eight items evaluate insight. The validity and reliability of the scale have been established (12).

Statistical Analysis

Data were analyzed using IBM SPSS Statistics 22 (IBM SPSS, Turkey). The normal distribution of variables was assessed using the Kolmogorov-Smirnov test, Q-Q plots, and histograms. Descriptive statistical methods, including minimum, maximum, mean, standard deviation, median, frequency, and percentage, were used. Student’s t-test was applied for comparing normally distributed quantitative data. The Mann-Whitney U test was used for non-normally distributed data. Qualitative data were analyzed with Fisher’s exact test, the continuity (Yates) corrected chi-square test, and the Pearson’s chi-squared test. The Pearson and Spearman’s Rho correlation analyses assessed relationships between scale scores. Linear regression analysis examined the predictive value of scale scores. Statistical significance was set at $p < 0.05$.

Results

Table 1 presents the sociodemographic data. An analysis of the scale data revealed that the subdimensions “difficulty describing feelings” and “difficulty identifying feelings,” as well as the total TAS-20 score, were significantly higher in the patient group compared to the control group ($p < 0.001$). However, no significant difference was found in the “externally oriented thinking” subscale between the two groups ($p = 0.073$) (Graphic 1).

The SRIS-insight subscale mean score was significantly lower in the patient group ($p < 0.001$), while no significant difference was observed in SRIS-self-reflection scores ($p = 0.703$) (Graphic 2).

In both groups, a significant negative correlation was found between SRIS-insight and the TAS-20 total score, as well as its sub-dimensions (“difficulty describing feelings,” “difficulty identifying feelings,” and “externally oriented thinking”) ($p < 0.001$) (Table 2).

Regression analysis indicated that, in both groups, the TAS-20 total score and all its sub-dimensions were negatively predicted by SRIS-insight. Additionally, in the patient group diagnosed with major depression ($R^2 = 0.401$; $p < 0.001$), the insight score more strongly predicted the TAS-20 total score and its sub-dimensions ($R^2 = 0.422$; $p < 0.001$) (Tables 3 and 4).

Table 1. Socio-demographic datas

Socio-demographic features		Patients	Controls	Total	Test value	p-value
Age of marriage (years) (n=88)	Min.-Max.	13-33	18-33	13-33	2-2,642	0.011*
	Mean±SD	23.37±4.49	25.69±3.72	24.56±4.25		
Number of kids (n=88)	No kids	8 (18.6%)	18 (40%)	26 (29.5%)	15,989	0.112
	One kid	10 (23.3%)	11 (24.4%)	21 (23.9%)		
	Two kids	14 (32.6%)	10 (22.2%)	24 (27.3%)		
	Three and more	11 (25.6%)	6 (13.3%)	17 (19.3%)		
Have own room in childhood	Yes	38 (47.5%)	41 (51.3%)	79 (49.4%)	10,225	0.635
	No	42 (52.5%)	39 (48.8%)	81 (50.6%)		
Diagnosed a psychiatric disorder before	Yes	34 (42.5%)	15 (18.8%)	49 (30.6%)	10,620	0.001**
	No	46 (57.5%)	65 (81.3%)	111 (69.4%)		
Have a family member who has somatic complainings	Yes	34 (42.5%)	35 (43.8%)	69 (43.1%)	0,025	0.873
	No	46 (57.5%)	45 (56.3%)	91 (56.9%)		
Apply to a doctor because of somatic complainings	Always/often	9 (11.3%)	3 (3.8%)	12 (7.5%)	14,695	0.002**
	Sometimes	34 (42.5%)	36 (45%)	70 (43.8%)		
	Rarely	13 (16.3%)	2 (2.5%)	15 (9.4%)		
	None	24 (30%)	39 (48.8%)	63 (39.4%)		
Self injury behaviour	Yes	22 (27.5%)	4 (5%)	26 (16.3%)	13,272	<0.001**
	No	58 (72.5%)	76 (95%)	134 (83.8%)		

*Pearson Correlation Coefficient, ** $p < 0.01$

Discussion

Our findings indicate that alexithymia and its subdimensions increase as insight decreases. Regression analysis further demonstrated that low insight in depression is a strong predictor of higher alexithymia scores.

Although limited, studies examining the correlation between insight and alexithymia suggest a similar trend.

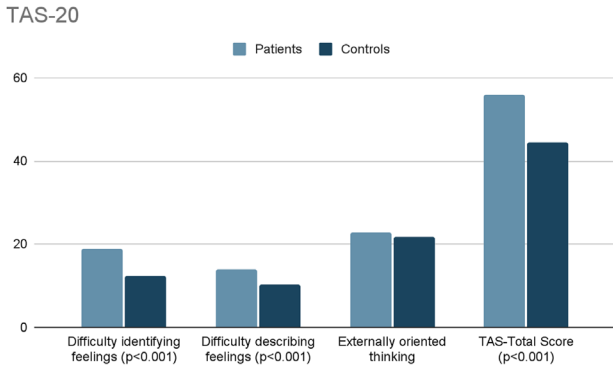
Research in non-clinical populations has shown that insight decreases as alexithymia increases, as measured by the SRIS (4). While studies on insight have predominantly focused on psychotic disorders, other psychiatric disorders have also been explored (13-15). A study in Turkey similarly identified a negative correlation between increased insight and alexithymic traits (16). Consistent with these findings, our study revealed that higher levels of alexithymia were associated with reduced insight in both groups.

Interestingly, our study also showed that insight was a more potent predictor of alexithymia in patients with major depression. Unlike prior studies, our results indicated that all aspects of alexithymia, including “difficulty identifying feelings”, “difficulty describing feelings”, and “externally oriented thinking”, increased as insight decreased in patients with depression.

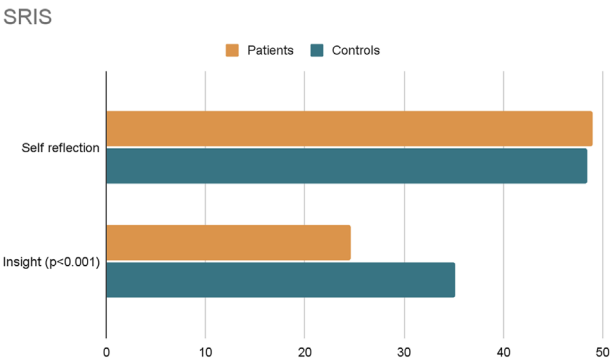
The link between alexithymia and depression has been well-established in the literature, with various studies highlighting distinct but interrelated structures (17-19). A prospective study demonstrated that individuals with higher alexithymia levels are more likely to develop depression over time (20). A 2021 review also confirmed a strong correlation between alexithymia and depression severity (21). Furthermore, alexithymia has been found to play a critical role in the somatization of emotions in depression (22).

A study examining the relationship between alexithymia, anxiety, stress, and depression emphasized the importance of these findings for targeted treatments (23). However, similar to our study, other research found no significant association between depression and the “externally oriented thinking” sub-dimension of alexithymia (24,25).

Insight plays a critical role in the management of depression, as it is associated with treatment adherence (26,27). Studies suggest that patients with major depressive disorders who lack insight are more likely to experience recurrent episodes (28). Strong self-reflection skills, which involve frequent evaluation of thoughts, behaviors, and



Graphic 1. Comparison of TAS-20 scores of study and control groups
Student’s t-test, TAS-20: Toronto Alexithymia Scale-20



Graphic 2. Comparison of SRIS scores of study and control groups
Student’s t-test, SRIS: Self Reflection and Insight Scale

Scale/Questionnaire	Sub-scale	Group	Toronto Alexithymia Scale			
			Difficulty identifying feelings	Difficulty describing feelings	Externally oriented thinking	TAS-Total
			r; p	r; p	r; p	r; p
Self Reflection and Insight Scale (SRIS)	Self reflection	Patients	0.106; 0.351	0.029; 0.798	-0.225; 0.056	-0.028; 0.805
		Controls	0.038; 0.735	-0.062; 0.585	-0.431; <0.001**	-0.194; 0.085
	Insight	Patients	-0.554; <0.001**	-0.407; <0.001**	-0.301; <0.001**	-0.627; <0.001**
		Controls	-0.561; <0.001**	-0.604; <0.001**	-0.338; <0.001**	-0.642; <0.001**

Pearson and Yates Chi-square test, **p<0.01

emotions, are linked to better emotional regulation and lower susceptibility to dysphoria and depression (29).

Interestingly, our study found that increased self-reflection in the non-depressed group predicted a reduction in externally oriented thinking. This finding aligns with the hypothesis that self-reflection can mitigate maladaptive thought patterns, although excessive self-reflection may also lead to anxiety and depressive symptoms (4,30).

In our study, as self-reflection increased in the non-depressed group, externally oriented thinking reduced; in fact, the increase in self-reflection skills predicted that the

severity of externally oriented thinking would reduce.

Anxiety often accompanies depression and significantly affects the disease's prognosis (31). In patients with depression, insight levels were observed to decrease as psychotic-like experiences and anxiety levels increased, with anxiety mediating this relationship (32). In our study, we similarly observed that as anxiety levels increased in patients with depression, their insight levels decreased. This suggests that anxiety levels should be carefully considered when assessing patients with depression.

Table 3. Regression analysis of TAS-20 and SRIS in the patient group

TAS-20 (Dependent variables)	SRIS (Independent variables)	Coefficient	SE	t	p	CI 95%	
						Lower bound	Upper bound
Difficulty identifying feelings	Constant	25.251	3.519	7.176	<0.001**	18.244	32.259
	Self reflection	0.147	0.064	2.286	0.025*	0.019	0.275
	Insight	-0.548	0.086	-6.357	<0.001**	-0.719	-0.376
Difficulty describing feelings	Constant	17.477	2.286	7.646	<0.001**	12.925	22.029
	Self reflection	0.042	0.042	1.013	0.314	-0.041	0.126
	Insight	-0.227	0.056	-4.054	<0.001**	-0.338	-0.115
Externally oriented thinking	Constant	30.967	2.444	12.671	<0.001**	26.101	35.833
	Self reflection	-0.095	0.045	-2.132	0.056	-0.184	-0.006
	Insight	-0.139	0.060	-2.318	0.023*	-0.258	-0.020
TAS-20 total	Constant	73.696	5.199	14.174	<0.001**	63.342	84.049
	Self reflection	0.094	0.095	0.990	0.325	-0.095	0.284
	Insight	-0.913	0.127	-7.174	<0.001**	-1.167	-0.660

SE: Standard error, CI: Confidence interval, *p<0.05, **p<0.01
TAS-20: Toronto Alexithymia Scale; SRIS: Self-reflection and insight scale

Table 4. Regression analysis of TAS-20 and SRIS in the control group

TAS-20 (Dependent variables)	SRIS (Independent variables)	Coefficient	SE	t	p	CI 95%	
						Lower bound	Upper bound
Difficulty identifying feelings	Constant	24.027	2.775	8.658	<0.001**	18.501	29.553
	Self reflection	0.051	0.039	1.309	0.194	-0.026	0.128
	Insight	-0.403	0.066	-6.144	<0.001**	-0.533	-0.272
Difficulty describing feelings	Constant	17.477	2.286	7.646	<0.001**	12.925	22.029
	Self reflection	0.042	0.042	1.013	0.314	-0.041	0.126
	Insight	-0.227	0.056	-4.054	<0.001**	-0.338	-0.115
Externally oriented thinking	Constant	34.914	2.617	13.342	<0.001**	29.703	40.125
	Self reflection	-0.144	0.037	-3.945	<0.001**	-0.217	-0.072
	Insight	-0.175	0.062	-2.835	0.006**	-0.298	-0.052
TAS-20 Total	Constant	79.600	5.244	15.181	<0.001**	69.159	90.042
	Self reflection	-0.085	0.073	-1.164	0.248	-0.231	0.061
	Insight	-0.887	0.124	-7.158	<0.001**	-1.133	-0.640

*p<0.05, **p<0.01
SE: Standard error, CI: Confidence interval, TAS-20: Toronto Alexithymia Scale, SRIS: Self-Reflection and Insight Scale

Our study also found that self-reflection levels increased in patients with depression. However, Grant et al. (4) noted that self-reflection is not always an adaptive function; excessive self-reflection may lead to heightened anxiety and depressive symptoms. Another study observed that individuals who engaged in intense ruminative thinking over three days experienced greater self-doubt and developed a negative self-perception (33).

These findings may serve as both a theoretical framework and empirical support for current transdiagnostic treatments targeting depressive and anxiety symptoms. Such interventions could include methods designed to enhance patients' self-insight. In our study, increased self-reflection in the non-depressed group was associated with reduced externally oriented thinking. Furthermore, improvements in self-reflection skills were found to predict a reduction in externally oriented thinking severity.

Study Limitations

Our study has several limitations. First, it was conducted during the coronavirus disease-2019 pandemic. As a result, participant interviews were carried out under precautionary measures (e.g., maintaining social distancing and limiting interaction time), which may have constrained the depth and application of interviews and scales. Second, the use of self-report scales may have introduced bias, as these scales rely on patients' subjective evaluations, which can sometimes lead to exaggerated symptoms. Third, participants in the patient group were included regardless of their history of previous depressive episodes. The relationship between alexithymia and depression remains controversial; thus, it is unclear whether alexithymia preceded the depressive episode or emerged as a consequence. A prospective study might provide more clarity on this relationship, as well as on treatment adherence and attitudes toward the treatment team in psychiatric conditions.

Despite these limitations, our study has significant strengths. Insight has been explored in only a few studies outside of psychotic disorders, and its role in depression has received limited attention in the literature. Furthermore, while most studies employing the SRIS scale for insight research have focused on non-clinical samples, our study included a clinical sample, adding value to the findings. Lastly, to our knowledge, this is the first study in Turkey to examine insight in patients with depression using the SRIS scale.

Conclusion

Investigating the predictors of insight, an essential factor in the treatment of major depressive disorders, is of

great importance. Our study demonstrated that assessing alexithymia can help predict not only the severity of depression and anxiety but also critical personality traits such as insight and self-reflection. These findings underscore the need for targeted interventions that address alexithymia, enhance insight, and promote self-reflection. Such interventions may improve treatment adherence and outcomes in patients with major depressive disorders. Further research, particularly longitudinal and interventional studies, is recommended to expand upon these findings and to develop more comprehensive treatment approaches.

Ethics

Ethics Committee Approval: This study was approved by the Clinical Research Ethics Committee of University of Health Sciences Turkey, Haydarpasa Numune Training and Research Hospital (approval no.: 2020/KK/184, dated 31.08.2020).

Informed Consent: All participants provided informed consent.

Footnotes

Authorship Contributions

Surgical and Medical Practices: A.Y.O., Concept: A.Y.O., M.Z.E., Design: A.Y.O., M.Z.E., Data Collection or Processing: A.Y.O., Analysis or Interpretation: A.Y.O., Literature Search: A.Y.O., Writing: A.Y.O., M.Z.E.

Conflict of Interest: No conflicts of interest were declared by the authors.

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