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Original Article

The Mediating Role of Alexithymia in the Relationship between Maladaptive Object Relations Patterns and Depression

Javad Bagheri Salami[1*], Zeinab Jangi[1]

Abstract

Objective: Depression is a prevalent psychological condition that severely impacts quality of life. Psychodynamic theories highlight early interpersonal experiences and maladaptive object relations as key factors in vulnerability to psychopathology. Alexithymia, characterized by difficulty identifying and expressing emotions, is a transdiagnostic risk factor strongly linked to depression. This study examines the mediating role of alexithymia in the relationship between maladaptive object relations and depression.
Method: This cross-sectional study used a path-analysis method. A total of 245 dormitory students (145 males and 100 females) from Iran University of Medical Sciences were selected via two-stage cluster sampling. Data were collected using the Bell Object Relations and Reality Testing Inventory (BORRTI), Toronto Alexithymia Scale (TAS-20), and Beck Depression Inventory–Short Form (BDI-S). Pearson correlation, regression analysis, and the Sobel test were conducted using SPSS version 20.
Results: Path analysis showed significant direct effects of maladaptive object relations (alienation, insecure attachment, egocentricity, social incompetence) on both alexithymia ($\beta = 0.395–0.444$, $P < 0.001$) and depression ($\beta = 0.365–0.562$, $P < 0.001$). Alexithymia also directly affected depression ($\beta = 0.176–0.287$, $P \leq 0.003$). Indirect effects of alexithymia in the relationship between object relations and depression ranged from 0.077 to 0.113, with all paths significant per the Sobel test.
Conclusion: Alexithymia significantly mediates the relationship between maladaptive object relations and depression, suggesting that early unhealthy relational patterns may foster depression by impairing emotional awareness. Therapeutic interventions should focus on enhancing emotional processing to promote sustainable recovery.

Key words: *Alexithymia; Depression; Mediation Analysis; Object Relations; Students*

1. Department of Clinical Psychology, School of Behavioral Sciences and Mental Health, Tehran Institute of Psychiatry, Iran University of Medical Sciences, Tehran, Iran.

***Corresponding Author:**
Address: Department of Clinical Psychology, School of Behavioral Sciences and Mental Health, Tehran Institute of Psychiatry, Iran University of Medical Sciences, Tehran, Iran, Postal Code: 9569118575.
Tel: 98-915 7104854, Fax: 98-51 54324063, Email: bagheri.j@iums.ac.ir

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Depression is one of the most prevalent and disabling psychological conditions worldwide, characterized by symptoms such as depressed mood, anhedonia, hopelessness, and cognitive impairments, all of which significantly deteriorate an individual's quality of life. This disorder not only affects personal well-being but also disrupts social interactions and daily functioning (1, 2). Due to its complexity, numerous studies have focused on identifying its risk factors and underlying mechanisms. Among these, psychodynamic and developmental approaches have emphasized the critical role of early interpersonal experiences in shaping vulnerability to psychological disorders later in life (3).

Object relations theory, a key branch within psychodynamic and developmental perspectives, centers on individuals' internal representations of themselves, others, and the relationships between them. These representations, which are formed through early interactions with primary caregivers, serve as internal templates that guide future relational patterns and influence how one perceives and responds to interpersonal experiences (4). Maladaptive object relational patterns, often assessed through instruments such as the Object Relations Inventory and the Bell Object Relations and Reality Testing Inventory (BORRTI), stem from disruptions in early relational bonds. These patterns include alienation (a sense of separation and rejection from others), insecure attachment (anxiety or avoidance in close relationships), egocentricity (excessive self-focus and difficulty understanding others' perspectives and needs), and social incompetence (inability to manage social interactions, characterized by isolation and poor interpersonal skills). Such maladaptive relational schemas often persist into adulthood and shape dysfunctional emotional and relational responses, which are associated with an increased risk of depression later in life (5, 6).

On the other hand, another line of research has focused on the role of *emotional processing* in mood disorders. Alexithymia is a psychological construct characterized by difficulties in identifying, describing, and differentiating between emotional states and bodily sensations. It is often associated with an externally oriented thinking style and a limited capacity for introspection (7). Alexithymia has been recognized as a transdiagnostic vulnerability factor for a wide range of psychological and medical conditions, and its strong association with depression has been confirmed in numerous studies (8). Individuals with alexithymia, due to impaired cognitive processing of emotions, are unable to use their emotional experiences as adaptive signals. This deficit often leads to the accumulation of unprocessed negative affect, vague somatic symptoms, and chronic psychological distress, which can contribute to the development of depressive episodes (9).

The theoretical bridge between object relations and alexithymia lies in developmental theories of emotion. The ability to understand, regulate, and symbolize emotions is a developmental achievement that emerges within the context of a secure and responsive caregiver-child relationship. Caregivers who are attuned to the child's emotional states and respond appropriately help the child learn to label and make sense of their emotional experiences (10). In contrast, early adverse experiences—such as emotional neglect, invalidation, or unstable relationships—can disrupt this developmental process. Under such conditions, emotions may be experienced as overwhelming or threatening, prompting the individual to avoid cognitive engagement with their emotional states. This avoidance forms the core of alexithymia (11).

Despite the strong theoretical foundation and empirical evidence supporting the dyadic relationships among these constructs, a significant gap remains in the literature. Specifically, the precise mechanism by which maladaptive object relations increase vulnerability to depression has not been thoroughly examined. Previous studies have primarily focused on direct associations and have largely overlooked the potential mediating role of alexithymia in the link between maladaptive object relations and depression (12, 13). It is plausible that alexithymia functions as a mediator in this relationship, suggesting that maladaptive object relations may contribute to depressive symptoms both directly and indirectly by impairing emotional awareness and expression.

Accordingly, the present study aims to examine the significance of a conceptual model in which each maladaptive object relations pattern directly influences both alexithymia and depression, and also indirectly affects depression through alexithymia. These objectives are theoretically valuable in advancing our understanding of how the quality of early object relationships and emotion regulation processes relate to the development of depression. Clinically, if the mediating role of alexithymia is confirmed, it would imply that therapeutic interventions for depressed individuals with a history of maladaptive object relations should specifically target emotional awareness and the capacity to process and express emotions, thereby potentially disrupting the path toward depression and fostering more sustainable recovery.

Materials and Methods

Participants

This study utilized a cross-sectional design with a path-analysis method. The target population consisted of dormitory students at Iran University of Medical Sciences during 2018 academic year, selected due to the university's high cultural diversity and accessibility. Students from various regions across the country attend this university, offering a broader representation of Iran's student population.

The sample size was determined based on the recommendations of Kline (2015), who suggests a minimum of 200 participants for simple mediation models in structural equation modeling to ensure the stability of estimates and sufficient statistical power (14). To account for potential attrition and enhance the study's ability to detect small effects, a sample larger than the minimum requirement was chosen. Ultimately, after excluding five participants who met the exclusion criteria, the final sample consisted of 245 students—145 males and 100 females.

A two-stage cluster sampling method was employed. In the first stage, one male dormitory and one female dormitory were randomly selected among the four male and seven female dormitories of Iran University of Medical Science. This approach was chosen to optimize time and logistical management. The selected dormitories were relatively homogeneous in terms of demographic characteristics. In the second stage, room numbers within each dormitory were listed, and a random selection of rooms was made. All residents of the selected rooms were invited to participate in the study.

The questionnaires were distributed in booklet format, and informed consent was obtained from all participants prior to data collection. Individuals who declined to participate were excluded without penalty. Participants were assured that their responses would remain confidential.

Inclusion criteria were: being at least 18 years old, residing in a dormitory, and providing informed consent. Exclusion criteria included current use of psychiatric medication and incomplete responses to the study instruments. To control for the potential confounding effects of antidepressant medication on depression scores, individuals currently taking psychiatric drugs were excluded. To identify such participants, a screening question was included in the questionnaire: *"I am currently taking psychiatric medication for the treatment of depression."* Respondents who answered affirmatively were excluded from the study. The entire research process took six months.

Instruments

Three standardized and psychometrically validated instruments, all normed within the Iranian population, were employed in this study:

Bell Object Relations and Reality Testing Inventory (BORRTI)

Developed by Bell and colleagues (1986), this instrument consists of 45 dichotomous (yes/no) items and measures four subscales: *social incompetence*, *egocentricity*, *alienation*, and *insecure attachment*. Higher scores indicate greater impairment in early object relational patterns (i.e., the independent variables) (6). The Persian version was standardized by Hadinezhad *et al*. (2014) on a sample of 141 Iranian students, with acceptable convergent validity demonstrated through correlations with the SCL-90-R (r = 0.45 to 0.60), and reliability confirmed via Cronbach's alpha (0.66–0.77) and a 21-week test-retest reliability coefficient (0.65–0.78) (15). In the present study, Cronbach's alpha for this scale was 0.82.

Toronto Alexithymia Scale (TAS-20)

Originally developed by Bagby *et al*. (1994), this 20-item self-report instrument uses a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). It comprises three subscales: *difficulty identifying feelings*, *difficulty describing feelings*, and *externally oriented thinking*, and was used to assess alexithymia as the mediator variable. The Persian version was validated by Besharat (2007) in a sample of 458 Iranian students. Construct validity was supported via correlation with psychological well-being (r = -0.52), and internal consistency (Cronbach's alpha = 0.85) and 4-week test-retest reliability (r = 0.80) were both found to be satisfactory (16). In this study, the Cronbach's alpha was 0.81.

Beck Depression Inventory – Short Form (BDI-S)

This is a 13-item abbreviated version of the original Beck Depression Inventory (1996), using a 4-point Likert scale (0 = not at all to 3 = severe) to assess the severity of depressive symptoms (i.e., the dependent variable). The Persian version was standardized by Ghassemzadeh *et al*. (2005) in a sample of 125 individuals, demonstrating acceptable validity (correlation with the full version: r = 0.67), internal consistency (Cronbach's alpha = 0.87), and test-retest reliability (r = 0.74) (17). In the current study, the Cronbach's alpha was 0.89.

Data Analysis

The data were analyzed using both descriptive statistics (mean and standard deviation) and inferential statistics, including Pearson correlation and regression analysis. Path coefficients for each of the proposed models were calculated using regression analysis, and the significance of indirect (mediated) effects was tested using the Sobel test. All statistical analyses were performed using SPSS version 20.

To manage outliers, the Winsorization method was applied, whereby extreme values were replaced with the 95th or 99th percentile values, as appropriate (18). Prior to conducting mediation analysis, the underlying assumptions of the model were evaluated.

Multicollinearity diagnostics indicated a maximum Variance Inflation Factor (VIF) of 3, a minimum Tolerance of 0.30, and all Condition Index values below 15, suggesting acceptable levels of multicollinearity. Furthermore, all correlation coefficients between independent variables were below 0.80, indicating no serious multicollinearity problems. The Durbin-Watson statistic was 1.79, confirming the absence of significant autocorrelation in the residuals (19). Tests for normality showed that skewness values ranged from 0.14 to 1.50 and kurtosis values from –0.36 to 2.50. While some variables showed slight deviations from perfect normality, all fell within acceptable statistical thresholds

(i.e., –2 to +2). The relative multivariate kurtosis index was 1, which is below the recommended cutoff of 3 (20). Overall, these findings indicate that the data met the assumptions necessary for conducting mediation analysis, and the proposed model was statistically sound and reliable.

Ethical Consideration

The present study was approved by the Ethics Committee of Iran University of Medical Sciences in compliance with ethical considerations, and the ethical code IR-IUMS.REC.13969411556003 was obtained by the researcher.

Results

The frequency distribution of participants by gender, educational level, and age is presented in Table 1. Among the participants, 59% (n = 145) were male and 41% (n = 100) were female. Regarding educational level, 49% (n = 120) were undergraduate students, 37.5% (n = 92) were master's students, and 13.5% (n = 33) were enrolled in professional doctoral programs. In terms of age, 77% (n = 188) were between 18 and 25 years old, 21% (n = 52) were between 26 and 33, and 2% (n = 5) were between 34 and 41 years old.

Table 1. Frequency Of Subjects Based On Age, Academic Level, And Gender (n = 245)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	145	59%
	Female	100	41%
Academic Level	Undergraduate	120	49%
	Master's	92	37.5%
	Professional Doctorate	33	13.5%
Age	18-25 years	188	77%
	26-33 years	52	21%
	34-41 years	5	2%

Table 2. Means, And Standard Deviations Of Maladaptive Object Relation Patterns, Alexithymia,Depression And Correlations Among Them (n = 245)

Variable	1	2	3	4	5	6
1. Alienation	–					
2. Insecure Attachment	0.629**	–				
3. Egocentricity	0.673**	0.673**	–			
4. Social Incompetence	0.666**	0.475**	0.357**	–		
5. Alexithymia	0.444**	0.435**	0.421**	0.395**	–	
6. Depression	0.551**	0.561**	0.562**	0.365**	0.387**	–
Mean	12.15	8.56	6.30	3.33	51.55	5.40
Standard Deviation	7.36	4.81	4.17	3.55	10.68	6.11

Note: ** P < 0.01

Table 2 presents the correlation matrix, means, and standard deviations of the study variables. The mean scores and standard deviations were as follows: Alienation = 12.15 (SD = 7.36), Insecure Attachment = 8.56 (SD = 4.81), Egocentricity = 6.30 (SD = 4.17), Social Incompetence = 3.33 (SD = 3.55), Alexithymia = 51.55 (SD = 10.68), and Depression = 5.40 (SD = 6.11). All correlations among the study variables were positive and statistically significant (P < 0.01). The strongest correlations were found between Alienation and Egocentricity, and between Insecure Attachment and Egocentricity (r = 0.673), while the weakest correlation was observed between Social Incompetence and Egocentricity (r = 0.357).

Table 3. Results Of The Regression Analysis Of Direct Paths Between Maladaptive Object Relations Patterns, Alexithymia, And Depression

Model	Path	B	SE	t	P-value
1	Alienation → Alexithymia	0.444	0.083	7.72	<0.001
	Alexithymia → Depression	0.176	0.034	2.99	0.003
	Alienation → Depression	0.553	0.044	10.34	<0.001

	Insecure Attachment → Alexithymia	0.435	0.128	7.50	<0.001
2	Alexithymia → Depression	0.176	0.034	2.99	0.003
	Insecure Attachment → Depression	0.560	0.067	10.50	<0.001
	Social Incompetence → Alexithymia	0.395	0.177	6.70	<0.001
3	Alexithymia → Depression	0.287	0.036	4.60	<0.001
	Social Incompetence → Depression	0.365	0.103	6.10	<0.001
	Egocentricity → Alexithymia	0.421	0.149	7.21	<0.001
4	Alexithymia → Depression	0.183	0.833	3.17	0.002
	Egocentricity → Depression	0.562	0.078	10.50	<0.001

Table 4. Total And Indirect Effect Of Alexithymia And Its Significance Based On The Sobel Test In The Four Proposed Research Models

Model	Indirect Effect	Z (Sobel)	P-value	Total Effect
1	0.078	2.01	< 0.05	0.522
2	0.077	2.92	< 0.01	0.512
3	0.113	2.14	< 0.05	0.508
4	0.077	2.57	< 0.01	0.498

Tables 3 and 4 show the standardized coefficients between variables for both direct and indirect paths, along with their significance levels. The results indicate that all hypothesized direct and mediating paths across the four models were statistically significant. In Model 1, the path from Alienation to Alexithymia was significant, with a standardized coefficient of 0.444, a standard error (SE) of 0.083, a t-value of 7.72, and a $P < 0.001$. The path from Alexithymia to Depression was also significant, with a coefficient of 0.176, $t = 2.99$, and $P = 0.003$. Additionally, the direct path from Alienation to Depression showed strong significance with a coefficient of 0.553 ($t = 10.34$, $P < 0.001$). The Sobel test confirmed the significance of the indirect effect of Alienation on Depression through Alexithymia, yielding an effect size of 0.078, with $Z = 2.01$ and $P < 0.05$. The total effect (direct + indirect) of Alienation on Depression was reported as 0.522.

In Model 2, Insecure Attachment showed a significant positive effect on Alexithymia ($\beta = 0.435$, $t = 7.50$, $P < 0.001$) as well as on Depression ($\beta = 0.560$, $t = 10.50$, $P < 0.001$). The path from Alexithymia to Depression was again significant, similar to Model 1 ($\beta = 0.176$, $t = 2.99$, $P = 0.003$). The Sobel test confirmed that Alexithymia mediated the relationship between Insecure Attachment and Depression, with an indirect effect of 0.077, $Z = 2.92$, and $P < 0.01$. The total effect was 0.512.

In Model 3, Social Incompetence was significantly associated with Alexithymia ($\beta = 0.395$, $t = 6.70$, $P < 0.001$) and also directly predicted Depression ($\beta = 0.365$, $t = 6.10$, $P < 0.001$). The path from Alexithymia to Depression was again significant ($\beta = 0.287$, $t = 4.60$, $P < 0.001$). The indirect effect of Social Incompetence on Depression through Alexithymia was 0.113, with $Z = 2.14$ and $P < 0.05$. The total effect was reported as 0.508.

In Model 4, Egocentricity was significantly related to Alexithymia ($\beta = 0.421$, $t = 7.21$, $P < 0.001$) and directly predicted Depression ($\beta = 0.562$, $t = 10.50$, $P < 0.001$). The path from Alexithymia to Depression remained significant ($\beta = 0.183$, $t = 3.17$, $P = 0.002$). The indirect effect of Egocentricity on Depression was calculated as 0.077 and found to be significant ($Z = 2.57$, $P < 0.01$). The total effect for this model was 0.498.

Discussion

The present findings demonstrate that all maladaptive object relations patterns exert significant direct effects on depression, aligning with prior research (21–23). Dysfunctional relationships with early object figures appear to impair identity formation and compromise individuals' capacity for satisfying interpersonal connections. This vulnerability diminishes their ability to form emotionally fulfilling relationships, ultimately increasing the risk of depression (24, 25).

Additionally, all maladaptive object relations patterns were found to have significant direct effects on alexithymia, which is consistent with previous studies (26, 27). One of the most salient psychological consequences of disturbed object relations is the development of alexithymia. The capacity to perceive, regulate, and symbolize emotions is considered a key developmental achievement—one that emerges in the context of secure and responsive caregiver relationships. When caregivers fail to attune to and validate a child's emotional states, this emotional scaffolding is undermined, increasing the individual's susceptibility to alexithymia (10).

The results further revealed that alexithymia significantly predicted depression across all four models, consistent with existing literature (8, 28, 29). Emotional

dysregulation and heightened sensitivity to environmental stressors have been identified as mechanisms that render these individuals particularly vulnerable to depressive symptoms (30).

Crucially, all maladaptive object relations patterns also exerted indirect effects on depression via alexithymia, supporting the hypothesis that alexithymia serves as a significant mediator in this relationship. These findings are in line with prior studies (31-34).

As Winnicott theorized, in the absence of adequate emotional mirroring from caregivers, a child is likely to develop rigid or maladaptive defense mechanisms. When a child grows up in an environment where their emotional experiences are invalidated or ignored, they may learn to suppress or disregard their feelings in order to preserve the relationship with their caregiver (35). Over time, this adaptive suppression becomes internalized, causing the child to lose touch with their authentic emotional experience (36). This developmental disruption impairs the individual's ability to identify and articulate emotions, which are hallmarks of alexithymia. Moreover, these individuals frequently experience difficulties in recognizing and cognitively processing their emotional states, which impairs their capacity to respond adaptively to environmental stressors. As a result, they are more prone to psychological disorders, including depression (30, 37).

Limitation

The primary limitation of this study lies in its reliance on self-report measures, which may have led to an underestimation of alexithymia due to participants' lack of insight or tendencies toward denial. Additionally, the study is subject to common method bias, as all data were collected from a single source, namely self-administered questionnaires. Another limitation involves the generalizability of the findings. Since the sample was restricted to dormitory students, the results may not be fully representative of other populations, particularly clinical groups. Future research is encouraged to employ more objective methodologies—such as clinical interviews or neuroimaging techniques—to explore the underlying neural mechanisms of alexithymia. Furthermore, incorporating clinical samples and utilizing multi-method assessments (e.g., clinical reports, physiological measures) would enhance both the accuracy and generalizability of the results.

Conclusion

The present study provides compelling evidence for a comprehensive model linking maladaptive object relations, alexithymia, and major depressive disorder. The findings indicate that all four patterns of maladaptive object relations - alienation, insecure attachment, egocentricity, and social incompetence - significantly contribute to vulnerability to depression through both direct and indirect pathways. Most importantly, alexithymia plays a crucial mediating role in the relationship between early relational disturbances and depressive symptoms, supporting the theoretical proposition that emotional processing deficits are a key mechanism through which childhood relational traumas manifest in adult psychopathology.

From a clinical standpoint, these findings have important implications for the design of targeted therapeutic interventions. Given the central role of alexithymia in linking maladaptive object relations to depression, treatments that aim to enhance emotional awareness and improve the ability to process and express emotions may be particularly beneficial for individuals with a history of disturbed object relationships. Therapeutic approaches such as Emotion-Focused Therapy (EFT), Intensive Short-Term Dynamic Psychotherapy (ISTDP), Dialectical Behavior Therapy (DBT), and Acceptance and Commitment Therapy (ACT)—all of which aim to strengthen emotion regulation and awareness—could prove effective in this context (38-41). Future studies could investigate the comparative effectiveness of these interventions in reducing both alexithymia and depressive symptoms.

Despite the aforementioned limitations, this study offers valuable insight into the psychological mechanisms underlying the link between early relational experiences and depression. It highlights the critical importance of addressing alexithymia in both the understanding and treatment of depressive disorders. Future research employing multi-method assessments and clinical samples may deepen our understanding of this relationship and contribute to the development of more effective therapeutic strategies.

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Conflict of Interest

None.

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