

Research Article

The Mediation of Personality in the Relation of Depression with Vulnerability Factors and Stressful Events

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Abstract

Depression constitutes a serious and frequent mental disorder with severe consequences. According to a psychodynamic approach, two predisposing depressive types of vulnerability, the anaclitic-dependent and the endogenous-self-critical, are triggered when certain events occur. The present research intends to examine their relationship to depression, exploring possible associations of these factors with the attachment patterns, the types of object relations developed by adults and self-esteem.

The sample consisted of 714 individuals, 323 depressed outpatients, and 391 participants in the control group who completed an improvised stressful events questionnaire, referring to interpersonal and achievement issues, Depressive Experiences Questionnaire-DEQ, Cartes de Modèles Individuels de Relations-CAMIR, Bell Object Relations Inventory-BORI, Beck Depression Inventory-BDI, and Rosenberg Self Esteem Scale-RSES.

Structural equation modeling revealed that depressive symptomatology was predicted to a greater extent by the self-critical type compared to the dependent one. It appeared that the recent interpersonal stressful events, depressive vulnerability types, insecure attachment and object relations predicted depressive symptoms. Dependency was linked to symptomatology through alienation. Similarly, self-criticism was shown to exert indirect effect on symptomatology mediated by alienation, egocentricity and insecure attachment. The diathesis-stress model was partially confirmed in the prediction of depressive symptomatology, since depend-

ency had an indirect though low effect on depression along with interpersonal stressful events. However, achievement-related events did not mediate the effect of self-criticism on depression. Moreover, diagnosis seemed to moderate the relation between vulnerability factors and stressful conditions and self-esteem appeared to marginally moderate the relation between self-criticism and depression.

A major limitation of the study is the inability to draw conclusions about causal relationships due to its cross-sectional design. Nevertheless, its strengths are the large sample and the inclusion of a control group. Future long-term studies with experimental design in clinical and non-clinical populations may lead to more generalizable results.

Keywords: Depression, vulnerability, dependency, self-criticism, stress, insecure attachment, object relations, self-esteem

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Introduction

According to WHO¹, unipolar major depression will become the second most important disorder in 2020 based on its burden, in terms of social and occupational functioning. Many researchers of this illness have concluded that they need to emphasize characterological elements and personality variables, for instance, Roth and Fonagy (2006)² who in a review of the results of its treatment together with Corveleyn, Luyten and Blatt (2005)³ noted that there was no correlation between the duration of pharmacotherapy and the likelihood of relapse after termination of treatment. Nevertheless, the role of predisposing personality organization in depression remains unclear⁴.

Blatt (Blatt, Quinlan, Zuroff, & Pilkonis, 1996)⁵ has greatly influenced the research of the role of personality types in the cause, efficacy of treatment, and prognosis of depression. His theory combines elements from the theories of Object Relations, Ego Psychology and Attachment. It studies this disorder through the couple of interpersonal relatedness and self-definition, that is, firstly, one's ability to form mature and satisfactory relations and secondly the development of realistic, positive and integrated self-identity. Blatt (1974)⁶ has proposed two types of depression; initially, the anaclitic, triggered by the discontinuation of close relationships with important others and characterized by the individual's dependence on them. This depressed person feels weak and helpless and is afraid of abandonment or losing close relationships. Consequently, he tries to keep in touch with the person who meets his needs. Then, the endogenous, whose depression is triggered by failure-related events, feels frustrated because he has not reached the standards set by him or by important others. He is characterized as self-critical and perfectionist, he feels worthless and guilty and is afraid of losing the recognition and approval of the loved ones.

These types are manifested by the occurrence of specific stressful conditions in which they are sensitive. Stress is the condition that occurs when a person interacting with the environment perceives a discrepancy between the demands of the situation and his resources. A stressful factor is the event or circumstance considered to be threatening or damaging⁷. The association of adverse environmental incidents with the onset of this disorder has been broadly recognized. Nevertheless, the combination of factors and the interaction of vulnerability

and stressful conditions that lead to depression have not been clarified.

Other etiological theories of depression, such as object-relations, have been formulated. They refer to the self structure that is internalized in childhood and serves as a draft for the establishment and maintenance of future relations⁸. This approach emphasizes the way in which depressed people understand, experience and mentally represent their relations with others. At the same time, attachment theory, which refers to a system of viewing, interpreting and internalizing social interactions, creating expectations for close interpersonal relations and shaping emotional and behavioral responses, has also proposed an interpretation of depression. Main (Main & Goldwyn, 1984)⁹ identified four adult attachment models, the autonomous one comprising individuals characterised by objectivity and self-confidence; the dismissing, including people who are distant, cautious, avoiding close relationships and social contacts and who prefer independence; the preoccupied, involving people with ambivalence, who have the need to control relationships, because they fear abandonment and are not sure about the commitment of their kin; and finally the disorganized, including those who have experienced traumatic emotional relationships.

Both these developmental configurations refer to experiences that can ensure stable interactions and mature interpersonal relationships with important others and a sense of positive, coherent and integrated self¹⁰. Therefore, the attachment and object relations may affect or relate to the appearance of these depressive vulnerability types through the influence on self-image and interpersonal relations. More specifically, on the one hand, these two types are related to the field of interpersonal relations, since the first one seeks acceptance of the others, and the second one their confirmation¹¹. On the other hand, they are connected to self-image, as one feels undeserving of love and the other unworthy of respect¹². The difficulty in healthy relationships' representation has been linked to the cause of depression¹³.

Finally, self-esteem, that reflects a person's belief about his/her self-worth, has been investigated as a causal factor of depression and as its consequence. Orth, Robins, Widaman and Conger (2014)¹⁴ noted that low self-esteem was a predictive factor of depression's vulnerability even after controlling for stressful events.

In summary, the present study approaches

depression through an advantageous, dimensional, new and not systematically studied perspective¹⁵, and not the prevalent categorical one¹⁶. It studies the disorder through the prospect of a synergistic, dialectical model of diathesis and stressful life events combined with the attachment and object-relations theories, in other words, through a novel, for Greek literature, interplay. It aims at discovering the extent to which issues of interpersonality, interdependence, communion and connection or independence, individuality, control and autonomy are central to the manifestation of depressive symptomatology.

Method

Participants

The sample of this study was composed of 714 adults with an average age of 34.9 years, 323 depressed patients with mean age of 37.4 years and 391 healthy controls with mean age 32.9 years. In the group of patients 67 (20.7%) were males and 256 (79.3%) females and in the control group 114 (29.2%) were males and 277 (70.8%) females.

Measures

A self-improvised demographic data and mental health questionnaire and a self-improvised life events questionnaire were completed to examine the recent 12-month stressful conditions, including 16 issues, eight on interpersonal relationships such as death, disease, conflict and divorce and eight on issues of achievement, such as income reduction, dismissal and unemployment.

The Autonomous and insecure patterns of attachment, and, in particular, the Preoccupied-Enmeshed, the Detached-Dismissing and the Unresolved, that together with the secure were not used in this research as they were out of the research scope, were evaluated with the Cartes de Modèles Individuels de Relations-CAMIR¹⁷, that contains 72 items and has shown sufficient internal consistency and test-retest reliability. Cronbach's alpha ranges from .68 to .95, while in terms of validity CAMIR has been associated with depression, suicide attempts and schizophrenia¹⁸.

Personality types prone to depression were assessed by the Depressive Experiences Questionnaire-DEQ¹⁹. It includes 66 items and three factors, Efficacy that was excluded from the present study, as it was outside of its aim, Dependency and Self-Criticism, corresponding to the anaclitic and

endogenous type, respectively. The test-retest reliability for Dependency has ranged from .89 to .81 and for Self-Criticism from .83 to .75, while the Cronbach alpha internal consistency index has been found .81 and .80 correspondingly²⁰. The convergent, divergent and construct validity have also been demonstrated²¹. Since DEQ has not been used in another survey in the Greek literature to the best of our knowledge, confirmatory factor analysis was performed with AMOS (version 21) in the current research, to validate the factor structure, and it demonstrated good fit between the data and the measurement model by the following indices $\chi^2(63) = 111.46$, $p < .001$, CMIN/df = 1.77, GFI = .98, CFI = .99, TLI = .98, RMSEA = .033. The internal consistency Cronbach alpha was .82 for Dependency and .87 for Self-Criticism.

Bell Object Relations Inventory-BORI²² estimates deficits in the ego's function with regard to object relations. It includes 45 items and four scales, a) Alienation, exploring one's inability to achieve trust, proximity and intimacy in relationships, b) Egocentricity, referring to the manipulation of others in order to satisfy one's ego, c) Social Incompetence, namely shyness, lack of close relationships and difficulty in creating friendships, and finally d) Insecure Attachment that evaluates anxiety and excessive concern about rejection in relationships, which was excluded from this study due to its overlap with Attachment. The internal consistency reliability has been estimated with the Cronbach's alpha and Spearman split-half indices and was found for the above scales, respectively, .90 and .90, .82 and .81, .78 and .78, .79 and .82. It has also shown sufficient discriminant validity by comparing patients with schizophrenia, emotional and personality disorders and non-clinical populations²³ and satisfactory convergent and divergent validity in a study of BORRTI's relationship with various questionnaires such as MCMI, MMPI and SCL-90-R. Since BORI has not been used in another survey in the Greek literature to the best of our knowledge, confirmatory factor analysis was carried out to validate the factor structure and demonstrated good fit between the data and the measurement model by the following indices $\chi^2(85) = 214.013$, $p < .001$, CMIN/df = 2.518, GFI = .96, CFI = .98, TLI = .97, RMSEA = .046. The internal consistency Cronbach alpha was .93 for Alienation, .85 for Social Incompetence, and .84 for Egocentricity.

General self-worth was evaluated by the Rosenberg Self-esteem Scale-RSES²⁴ which measures positive and negative self-feelings and includes

ten items that refer to the general view about oneself and are answered on a 5-grade scale. The test-retest reliability index has been found to range from .85 to .88, the internal consistency reliability index has ranged from .77 to .88²⁵, while in its validation with a Greek sample of students with an average age of 19 years it was found .80²⁶. RSES also exhibits good concurrent, predictive and construct validity²⁷.

Finally, Beck Depression Inventory-BDI²⁸ was administered to evaluate the recent depressive symptomatology. Cronbach alpha index has ranged from .73 to .92 with an average of .81 and .76 to .95 with an average of .86 in non-clinical and psychiatric populations, respectively. The test-retest reliability ranged from .48 to .86 in clinical populations and from .60 to .90 for non-clinical populations. It has high construct, discriminant, and criterion validity and distinguishes major depressive disorder from generalized anxiety disorder, dysthymic disorder and psychiatric patients from undergraduate students²⁹.

Procedure

The sample was selected by nonprobability sampling at outpatient clinics of 15 mental health centers and psychiatric departments of general hospitals in the prefecture of Attica, and waiting areas of a Social Insurance Institute's central branch, the Health Insurance Administration of the civil servants and a central branch of the National Bank to achieve a representative sample. People who took part were between 18 and 56 years of age and had completed compulsory education. Patients who met the DSM-IV diagnostic criteria for major depressive disorder participated in the group of patients, whereas those who did not meet any DSM-IV criteria were listed in the healthy controls group. Those who were picked received a consent form informing them about the purpose of the study and its confidential nature. This research applied a cross-sectional plan.

Statistical analysis

The curve estimation of the regression analysis showed linear correlations and therefore a Structural Equation Modeling was designed with the AMOS 21 statistical package. SEM is a set of multivariate analyses that includes latent variables representing hypothetical constructs and intends to analyze and describe the relations between numerous dependent and independent variables at the same time, to evaluate statistical parameters, such as fac-

tor covariances and error variances, and to confirm theoretical models estimating their fit to the data. We investigated the association of (endogenous variable) depressive symptomatology with (exogenous) psychological variables. Maximum likelihood estimation was used. Predictive factors were the depressive vulnerability types, dependency and self-criticism, as well as stressful events, insecure attachment, and object-relations types, alienation, social incompetence and egocentricity. The mediation and moderation model were examined. Insecure attachment was considered as negative internal working models interconnected with vulnerability³⁰ and object relations as personality traits that determine current interpersonal relations and were, therefore, used as mediators, while self-esteem was seen as a mitigating factor between the vulnerable personality and the disorder³¹ and set as a moderator. The influence of age and gender on symptomatology was controlled, because age was found to have significant, albeit low, relevance to diagnosis, and because different outcomes, concerning gender, have been reported, particularly with regard to depressive vulnerability factors.

Results

Because of their high correlation, the two insecure attachment patterns were merged and a factor, called insecure attachment, was created and improved the validity of this latent variable in the measurement model. In this context, there was metric and configural invariance. In the confirmatory factor analysis, which includes the assessment of the validity of the measurement model, all factors met the criteria to confirm the convergent and divergent validity and reliability (Table 1).

With respect to the structural model in Figure 1, which illustrates the standardized coefficients of measurable and latent variables associated with their error terms, the optimal solution of the structural equation model is presented. As shown by the convergence coefficients, $\chi^2(65) = 132.285$, $p < .001$, CMIN/df = 2.035, GFI = .989, CFI = .994, RMSEA = .022, SRMR = .026, TLI = .974, empirical data supported the theoretical model. Therefore, it appears that the model fits well the data. It is noted that the recent interpersonal stressful events ($\beta = .11$, $p < .001$), the depressive vulnerability types, dependency ($\beta = -.05$, $p < .05$) and self-criticism ($\beta = .65$, $p < .001$), insecure attachment ($\beta = .13$, $p < .001$) and object relations, alienation ($\beta = .10$, $p < .01$), social

incompetence ($\beta = .19, p < .001$), and egocentricity ($\beta = -.16, p < .01$) directly predict the dependent variable. In addition, dependency can also predict symptomatology indirectly, through alienation ($\beta = .43, p < .001$) and interpersonal stressful events ($\beta = .28, p < .001$). Similarly, self-criticism has been shown to indirectly influence symptomatology through the object relations, alienation ($\beta = .49, p < .001$), social incompetence ($\beta = .59, p < .001$) and self-criticism ($\beta = .91, p < .001$) as well as insecure attachment ($\beta = .77, p < .001$). In the statistically insignificant standardized coefficients the corresponding arrows were omitted in the diagram. The multiple correlation coefficient was found to be $R^2 = .73$ and therefore the model explained 73% of the variation of depressive symptomatology.

The factors controlled for their effect on subjects and groups based on literature were age and gender. Gender did not exert impact on depressive symptomatology ($\beta = .02, NS$), but age affected it ($\beta = .08, p < .001$). In particular, the effect of age on symptomatology was significantly lower ($z = -1.74, p < .10$) for those who had high ($\beta = .09$) than those who had low self-esteem ($z = -2.25, p < .05$), and higher for the depressed ($\beta = .11$) than for the healthy controls ($\beta = -.02$).

With regard to the moderation in the structural model, we used multi-group analysis. Self-esteem was found to be a statistically important moderator of the relationship between various dimensions. In particular, the effect of dependency on alienation was greater ($z = -1.68, p < .10$) for those who displayed low ($\beta = .51$) than those who had high self-esteem ($\beta = .43$); as for recent interpersonal stressful events, it was significantly greater ($z = -2.35, p < .05$) for those with low ($\beta = .24$) than high self-esteem ($\beta = .10$). In other words, as self-esteem increases, the influence of dependency on alienation and recent stressful interpersonal events decreases.

In addition, the effect of self-criticism on egocentricity was higher ($z = -1.72, p < .10$) for those who displayed low ($\beta = .86$) than those who had high self-esteem ($\beta = .80$), on insecure attachment it was significantly higher ($z = -2.27, p < .05$) for those who showed low ($\beta = .68$) than those who had a high self-esteem ($\beta = .58$) and on depressive symptomatology it was higher ($z = -1.93, p < .10$) for those who showed low ($\beta = .60$) than those who had high self-esteem ($\beta = .57$). Hence, the more self-esteem increases the less self-criticism affects egocentricity, insecure attachment, and depressive symptomatology.

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We also investigated diagnosis as a moderator in structural equation modeling. The influence of dependency on recent interpersonal stressful events was significantly greater ($z = -3.21, p < .01$) for the depressed ($\beta = .20$) than the healthy controls ($\beta = -.02$), that is, as depressed mood reduces the influence of dependency on interpersonal stressful events diminishes. The effect of social incompetence on depressive symptomatology was significantly greater ($z = -2.33, p < .05$) for the depressed ($\beta = .24$) than the healthy controls ($\beta = .09$). Finally, the effect of self-criticism on the recent stressful achievement-related events was significantly greater ($z = -2.36, p < .05$) for depressed ($\beta = .40$) than controls ($\beta = .19$), in insecure attachment it was significantly greater ($z = -2.99, p < .01$) for depressed ($\beta = .63$) than controls ($\beta = .49$), and in depressive symptomatology it was significantly greater ($z = -2.26, p < .05$) for depressed ($\beta = .61$) than controls ($\beta = .56$).

Discussion

The present study aims to delineate the factors that influence the course of depression and are related to personality and stress. It showed that the recent interpersonal stressful events, the self-critical vulnerability, insecure attachment, and object relations directly predict the dependent variable. Self-criticism is a stronger predictor. The diathesis-stress model was confirmed in the field of interpersonal relations. Self-esteem seemed to moderate in a greater extent the relationships between self-criticism and attachment, as well as dependency and interpersonal events.

As for mediation, the negative and low influence of dependency on depressive symptomatology may be due to its composition by the sub-factors of Connectedness or Relatedness, the positive, mature, and more adapting side of dependency, and Neediness³², although these were not retrieved by the exploratory factor analysis, as noted in other studies³³. It seems that connectedness reflects anxiety about the loss of a particular person, with whom one is closely connected and maintains real contact, as well as appreciation of this relationship that does not reach the point of helplessness³⁴. Consequently, participants showed high-level anaclitic concerns, but seemed capable of developing warm, intimate relationships³³. It is probable though that, when confronted with instability of interpersonal relationships,

and lack of real contact and predictability in them, as well as intense interpersonal conflicts, depressive symptomatology appears to be slightly reinforced.

Self-criticism was a stronger predictor of depression than dependency, as in Enns and Cox (1997)³⁵. Insecure attachment also stems from indifference or early excessive parental involvement that makes it difficult to develop a stable representation of a parent as a caregiver and of oneself as a loved person. Thus, the self-critical constantly seeks care. At the same time, he tries to meet the high criteria set by the strict parent fearing that he will lose his acceptance and is, therefore, prevented from attempting to become independent³⁶. Therefore, insecure attachment, either as parental over-involvement or as rigidity, can strengthen the feelings of guilt.

Object relations also reinforced the connection of self-criticism with the disorder although egocentricity had a negative direct effect on mental illness. The feeling of omnipotence and the participants' belief that they are the center of the universe are probably related to the attenuation of the symptoms. However, when these characteristics are associated with feelings of shame, inferiority and concern for self-worth, they are related to an exacerbation of psychopathology.

Finally, the direct effect of interpersonal events and the simultaneous absence of the effect of achievement events on symptomatology may be due to the patient sample, since it has been observed that, when the relationship of stress with the disorder is causal, it is greater at the onset of depression than at relapse³⁷. The inability to fully confirm the diathesis-stress model in depression may be attributable to the inclusion of two different groups and to the heterogeneity of the depressive group. We included patients who were treated with medication or not; who did or did not receive psychotherapy; who had their first or additional episode. Moreover, the association of stress and depression has been challenged by some scholars³⁸ and the different conclusions have been attributed to various methodological strategies followed in the investigated population. To sum up, it appears that participants that focus mainly on the loss of loved ones, when they lose confidence in their relationships, may become hostile, skeptical and remote, and experience depressive symptoms.

Regarding moderation, we found that self-esteem has weakened the relationship between self-criticism and symptomatology, as has been also

shown in a study by Flett, Hewitt, Blankstein, and O'Brien (1991)³⁹, perhaps because the experiences of self-critical depressed are more focused on feelings of insecurity, failure to achieve goals and ambivalence for oneself³³. Thus, it counterbalanced the negative self-assessments of the participants. High self-esteem also worked proactively against the connection of self-criticism with egocentricity. Furthermore, the relationship of insecure attachment and self-criticism was found to be significantly regulated by self-esteem, which in another research appeared to play a mediating role among them⁴⁰. Self-esteem did not significantly regulate the relationship of dependency with depression. Therefore, the view that depression stems from helplessness coming from the loss of love or of individual's independence, which leads to a reduction in self-esteem⁴¹, is not fully confirmed. However, the dependent person with low self-esteem probably makes negative self-assessments so that, when faced with an interpersonal conflict, he/she intensely refrains from emotional expression, which would help to avoid possible separation⁴². Therefore, low self-esteem contributes, through vulnerability, to the creation of the stressful environment, which in turn aggravates it.

Thereafter, it was noted that diagnosis strengthened the relationship between vulnerability and relevant recent adverse conditions, similarly to Mongrain and Zuroff (1994)⁴². Additionally, the higher impact of self-criticism on insecure attachment in patients may indicate that the tendency to take responsibility and the concern for failure to meet the self-expectations bring about memories of their family history that lack a sense of security towards their parents. This is in accordance with Sandquist, Grenyer, and Caputi (2009)⁴³ who consider self-criticism as associated with strict parental control, over-protection, and lack of parental responsiveness.

In addition, the significantly greater difference of the effect of self-criticism on depressive symptomatology for the depressed patients has also been discovered by earlier studies⁴⁴. Nietzel and Harris (1990)⁴⁵ in meta-analysis noted a greater average effect size of self-criticism on depression compared to dependency. We did not mark the same significant difference in dependency, because the participants in both groups possibly do not experience feelings of helplessness and annihilation after the loss of a close relationship, but loneliness and discomfort, because of the value they attach to it.

With regard to object relations, shyness,

uncertainty about how to interact with others, and the difficulty of depressed people to create friendships, which actually has an impact on depressed mood, seem to separate the two groups. Similar findings were made by Hammen and Rudolph (2003)⁴⁶, who argued that social incompetence is the strongest predictor of depression. The effect of insecure attachment on symptoms was greater, but not significant, in depressive than in healthy subjects, unlike other studies⁴⁷.

It was not gender, but age, that affected symptomatology, to a greater extent among participants with low self-esteem, marginally, and depressed. Older people exhibited higher symptomatology. Stordal et al. (2001)⁴⁸ in a literature review reported higher scores in depression for women, but unclear results for the relation of age and this disorder, which is attributed to the different study design. On the contrary, they observed in a large sample of individuals between 20 and 89 years of age that the differences between the two genders were minimal and discovered a positive association of age and depression in both genders.

Finally, we have to mention certain methodological problems, such as the exploratory nature of the present study, the absence of random sampling for the data collection and the retrospective plan that does not allow reference to causal relationships, but only correlations between the variables studied. Despite its limitations, the present study has considerable advantages. It includes a large sample and a control group, features a dimensional approach to the disorder and, to the best of our knowledge, it is the first study in the Greek area to investigate the relationship of depressive dimensions with other personality factors as well as stressful conditions in the prediction of depression. It may lead to a more profound understanding of the events that contribute to the onset of depression and to the differentiation of the treatment of anaclitic and endogenous persons. Future studies can be long-term, experimental, and include clinical and non-clinical populations in order to arrive at more generalizable conclusions.

Conclusions

Two developmental pathways have been confirmed to predict depressive symptomatology with the contribution of insecure attachment, object-relations, and self-esteem. Our results highlight the stronger prediction of depression by self-criticism and its connection with dependency through the

mediation of interpersonal stress.

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Table 1

Correlation structure matrix

	CR	AVE	Dependency	SC	Alienation	Social Incomp.	Egocentr.	Insecure Attachment
Dependency	.822	.483	.695					
Self-Criticism	.870	.456	.419	.675				
Alienation	.925	.713	.590	.636	.844			
Social Incompetence	.846	.580	.196	.496	.498	.761		
Egocentricity	.854	.496	.371	.845	.670	.642	.704	
Insec. Attach.	.842	.728	.321	.678	.482	.396	.637	.853

CR: Composite Reliability, AVE: Average Variance Extracted.

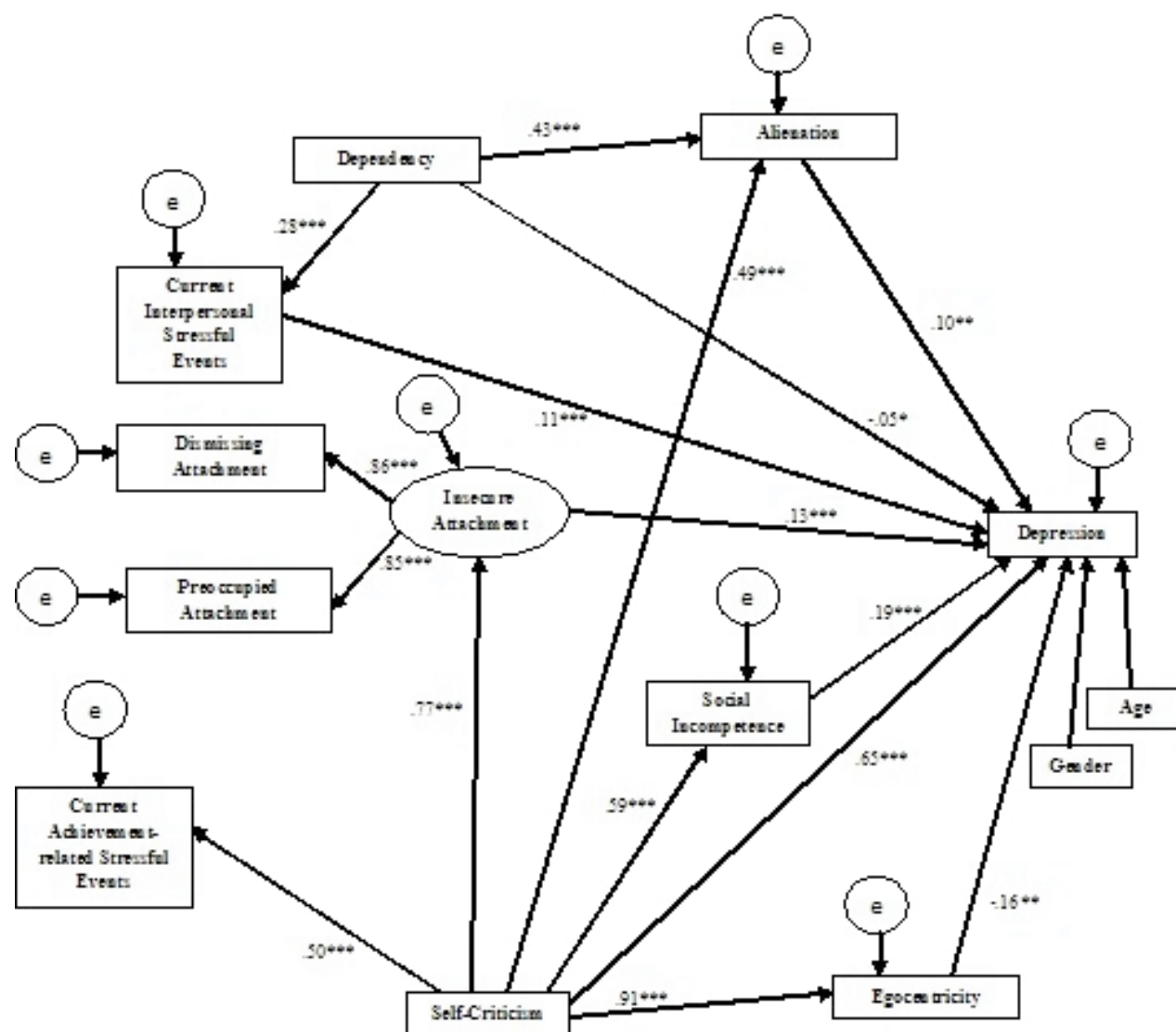


Figure 1. Structural equation modeling for prediction of depressive symptomatology by psychological factors. Non significant effects were omitted. * $p < .05$, ** $p < .01$, *** $p < .001$.