

Research Article

THE MEDIATING ROLE OF SELF-CRITICISM AND DEPENDENCY IN THE ASSOCIATION BETWEEN PERCEPTIONS OF MATERNAL CARING AND DEPRESSIVE SYMPTOMS

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Background: *This study examined a theoretically based mediation model including participants' perceptions of early relationships with their mother, self-criticism, dependency, and current depressive symptoms. We expect that (a) early relationships characterized by low levels of care and high levels of overprotection will be positively associated with both current depressive state and self-criticism and dependency; (b) high levels of self-criticism and dependency will be positively associated with depressive symptoms; and (c) self-criticism and dependency will play a mediating role in the association between participants' perceptions of early relationships characterized by low levels of care and high levels of overprotection and their current depressive symptoms.* **Methods:** *A nonclinical community sample of 200 Portuguese adults participated in the study. Perceptions of early relationships were measured using the mother scales of the Parental Bonding Instrument (Parker et al. [1979: Br J Med Psychol 52:1–10]), levels of self-criticism and dependency were measured using the Depressive Experiences Questionnaire (Blatt et al. [1976: J Abn Psy 6:383–389]), and depressive symptoms were measured using the Center for the Epidemiological Studies of Depression Scale (Radloff [1977: Appl Psychol Meas 1:385–401]).* **Results:** *Structural equation modeling showed that the link between participants' perceptions of early caretaking relationships with their mothers and their current depressive symptoms is mediated by high levels of self-criticism—a personality trait associated with vulnerability to depression—but not Dependency. However, an ancillary analysis indicated that the link between participants' perceptions of early maternal overprotective relationships and their current depressive symptoms is mediated by high levels of Neediness.* **Conclusions:** *Findings underscore the role of perceived early relationships in psychological vulnerability to depression among highly self-critical and among highly needy individuals and highlight the negative role played by perceived mothers' early dysfunctional practices, characterized by low levels of caring and high levels of overprotection, for the self-critical vulnerability to depression and*

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by perceived mothers' high levels of overprotection, for the neediness vulnerability to depression. These potential causal mechanisms warrant longitudinal evaluation. Theoretical and clinical implications of the findings are discussed. Depression and Anxiety 27:1149–1157, 2010. © 2010 Wiley-Liss, Inc.

Key words: *parental bonding instrument; perceptions of early relationships; self-criticism; dependency; depressive symptoms*

Empirical studies assessing adults' perceptions of early caretaking relationships have confirmed the relevance of these relationships for the study of health and distress regulation.^[1–4] Consistent with the notion that clinical symptoms and psychological distress may result from disrupted internal working models, we investigated the role of perceived experiences of early relationships with mother and the intervening role of the self-critical and dependent personality vulnerability traits in the relationship between perceived early experiences and depressive symptoms.

Blatt^[5,6] proposed a model in which personality development is characterized as the integration of an individual's capacity for self-definition and interpersonal relatedness. Self-definition refers to the development of a positive and integrated sense of identity, whereas interpersonal relatedness refers to a process through which a person establishes and maintains reciprocal, mature, and satisfying relationships with others. Coordination and integration of interpersonal relatedness and self-definition is essential for optimal personality development and is also assumed to reduce stress and lead to physical and psychological well-being.^[7]

The coordinated normal development of the processes of self-definition and interpersonal relatedness can be disrupted, however, and this disruption can be expressed as high levels of self-criticism and/or high levels of dependency. Self-Criticism and Dependency are personality dimensions which are also associated with a vulnerability to depression.^[7–22] Highly self-critical individuals may experience depressive states when confronted with stressful life events, particularly events that disrupt self-definition and/or a sense of personal achievement. On the other hand, high Dependent individuals are especially vulnerable to threats to close interpersonal relationships. A considerable body of empirical research has demonstrated the relevance of high levels of Self-Criticism and Dependency as trait vulnerabilities for depression.^[23–37,75]

According to Blatt's theory, the Dependency and Self-Criticism vulnerabilities originate at different moments in the individual's development, as the result of specific types of disturbed parental relationships.^[11,14] In a review of available data on the characteristics of the parents of self-critical and dependent individuals, Blatt and Homann^[14] concluded that there is an inextricable link between these personality vulnerabilities and attachment insecurity.

These authors inferred that impaired working models of the self and other create a remarkable vulnerability to depression. Insecurely attached individuals' difficulties' with separation lead to a constant seeking of reassurance and support and an anticipation of rejection and criticism, thereby producing very low levels of self-esteem and an increased need for acknowledgement.

A considerable amount of research has demonstrated an empirical relationship between experiences of perceived dysfunctional early relationships with caregivers, namely one's mother, and depressive vulnerability traits and depressive symptoms in adulthood. The role of the quality of maternal practices in the development of the Self-Critical and Dependent vulnerabilities to depression is consistent with a review of the attachment and depression literature that shows a persistent association between depression and insecure attachment styles.^[28] Levy et al.^[38] and Zuroff and Fitzpatrick^[39] provided evidence regarding the association between attachment insecurity and the dependent and self-critical vulnerabilities to depression. These researchers found an association between the Fearful-avoidant style and self-criticism and between the preoccupied attachment style and dependency as determined by self-reports. More recently, Reis and Grenyer^[40] corroborated the associations between fearful attachment and self-criticism and between preoccupied attachment and dependency. In a study of vulnerability to depression in married couples, Besser and Priel^[26] found that according to targets' self-reports and also according to spouses' reports about targets, low positivity of the self dimension of attachment was associated with high self criticism (but not dependency), and both were associated with high depression scores.

Individuals with current depression also report more negative experiences with their parents.^[17,41] They recall their mothers and fathers as uncaring, rejecting, overly critical, and punitive.^[11] Caregivers that are perceived as overly critical, punitive, depriving, and negligent constitute a precursor for depression in adults.^[8] Schwarz and Zuroff^[42] reported a significant correlation between depression, as measured by BDI (Beck Depression Inventory), and inconsistency in the affection of both parents. Furthermore, Blatt et al.^[17] found that levels of Self-Criticism correlated with negative concepts of father and mother on a semantic differential. McCrae and Bass^[43] reported that

self-critical individuals tend to recall their parents as cold and as having placed great importance on high levels of achievement. Quinlan et al.^[44] found that descriptions of both parents as benevolent correlated negatively with depression, as measured by the Zung Depression Scale, and with the Self-Criticism factor of the DEQ. The description of mother as punitive correlated positively with depression (as measured by the Zung Depression Scale) and with DEQ Self-Criticism. This correlation was much stronger than the correlations between the perception of father as punitive and depression and Self-Criticism, as evaluated using the same measures.

OVERVIEW AND HYPOTHESES

The important role of mother and disturbances in mother–infant bonding as a distal vulnerability event for future psychopathological outcomes, namely depression, is stressed by both attachment and object-relations theories. The general aim of this study is to assess the associations between adult participants' perceptions of early dysfunctional practices within the mother–child relationship on their current depressive symptoms and in their level of self-criticism and dependency. We used the Parental Bonding Instrument (PBI^[45]) which assess care and overprotection experiences in a community sample including an equal number of males and females and then address the relationship of these early experiences to Self-Criticism, Dependency, and depression.

Given the important role of Self-Criticism and Dependency as vulnerability factors for depression and the impact of early parental practices on the development of these core personality traits, we will assess the mediational effect of Self-Criticism and Dependency.

Although many studies have addressed the impact of early experiences on current depression and vulnerability associated with depression, to the best of our knowledge, no study has examined the impact of perceived care and overprotection experiences, as assessed by the PBI, on current depressive symptoms as mediated by Self-Criticism and Dependency, specifically in a community sample. The study of individuals that may be vulnerable to depressive states, but are not necessarily clinically depressed, has theoretical and empirical importance, no less than the study of actual clinical phenomena.^[13,46] Marked depressive symptoms may overshadow some important aspects of inner experiences related to depressive vulnerability.

Other studies have examined the same mediational associations but with different samples. Enns et al.^[47] using a sample of depressive outpatients found that lack of care by mother as measured by the PBI was significantly associated with depression as measured by the BDI, and that self-criticism mediated this relationship. Soenens et al.^[48] showed that dependency-oriented and achievement-oriented psychological

control by parents were differentially related to adolescent dependency and self-criticism and that these personality traits act as mediating variables between the expressions of psychological control and depressive symptoms.

This study is conducted in a nonclinical study for several reasons: First, depression appears to be relatively prevalent in nonclinical populations. Second, clinical participants diagnosed with moderate depression may be unrepresentative because the most severe or dysfunctional cases (those that have the most frequent or lengthy treatments) are those that are most likely to be sampled in clinical studies. The same is with extreme self-critics and dependent individuals. Third, evidence suggests that nonclinical adults with depression features and personality vulnerability predispositions present a level of dysfunction across a number of spheres of functioning that is severe enough to warrant further study.^[6]

We expect that (a) early relationships characterized by low levels of care and high levels of overprotection will be positively associated with both current depressive state and Self-Criticism and Dependency; (b) high levels of Self-Criticism and Dependency will be positively associated with depressive symptoms; and (c) Self-Criticism and Dependency will play a mediating role in the association between participants' perceptions of early relationships characterized by low levels of care and high levels of overprotection and their depressive symptoms.

METHOD

PARTICIPANTS AND PROCEDURE

A convenience nonclinical community sample of 200 adults, the great majority living in the district of Évora, Portugal, participated in this study. One hundred participants were male and one hundred were female; their ages ranged from 19 to 69 years ($M = 36.39$, $SD = 11.69$). The majority of the participants (more than 95%) were Caucasian and their education levels ranged from 6 to 19 years ($M = 12.16$, $SD = 3.41$). Only a minority of the participants were unemployed (3%). All early caregivers for the sample participants were mothers. At the time of the assessment, participants were not living with their parents and no participants reported that their mother died when they were young. Participants responded to a call for volunteers to participate in our study, were contacted by research assistants, and volunteered to participate and gave informed consent. Eighty five percent of people contacted agreed to participate in the study. All protocols were collected in individual sessions by research assistants. Instructions were presented in a written form. Potential order effects were controlled by a randomized presentation of the questionnaires. Participation in the study was voluntary and participants were not paid or compensated for their participation. Data were collected while controlling and counterbalancing gender to end collection with an equal number of men and women.

MEASURES

The depressive experiences questionnaire. The DEQ is a 66-item questionnaire constructed to measure depressive experiences.^[7] It provides results for three scales or factors, which

were derived from the main principal component analysis that was conducted with the original standardization sample of American college students.^[13,49] Factor 1 was labeled Dependency and Factor 2 was labeled Self-Criticism. In addition to these two factors, which are consistent with the two depressive dimensions previously presented by Blatt,^[8] the factor analysis revealed one more factor, which was labeled Efficacy. According to Blatt et al.,^[13] each of the standardized scores of the 66 items should be multiplied by the factor weight coefficient obtained in the model sample for the loadings on Self-Criticism, Dependency, and Efficacy. In this unit-weight scoring system, all 66 items contribute to form the final scores of each factor in a manner proportional to their factor weight coefficients.

The Portuguese version of the DEQ presents appropriate psychometric properties.^[50,51] Its internal consistency and factorial structure were found to be very similar to those obtained by Blatt.^[13,49,52] Cronbach's α levels varied between .70 and .82 for the three scales: Dependency, Self-Criticism, and Efficacy. In the present study, we consider the DEQ Self-Criticism and Dependency scales only. In the present sample, alpha reliability coefficients were .80 and .72 for the Self-Criticism and Dependency scales, respectively.

The PBI. Perceptions of early relationships were measured using the Mother¹ scale of Parker et al.'s^[45] PBI. This is a 25-item, self-reported measure of participants' memories of their own mothers' behaviors and attitudes until 16 years old. The PBI yields two scores: one for care and one for overprotection. These variables stem from two bipolar factors, with 12 items assessing care versus indifference and rejection, and 13 items assessing overprotection versus allowance of autonomy and independence. These variables were defined according to Bowlby's basic conceptualization of good parenthood as responsiveness to the child's desire for love and protection, on the one hand, and respect for the child's desire to explore and extend his/her relationships with the environment, on the other.^[2,53] According to a recent overview of the psychometric properties of this Inventory,^[54] the PBI has adequate psychometric properties and there is convincing evidence concerning its construct validity.

The Portuguese version of this Inventory^[55] presents good psychometric characteristics. The Cronbach's α values for the different scales varied between .72 and .92. In the present sample, α reliability coefficients were .90 and .85 for the Care and Overprotection scales, respectively. It may be noted that Care and Overprotection, the basic dimensions assessed by the PBI scales correspond to Hinde's^[56] assumption about the two key dimensions that define significant interpersonal relationships, in general.

Center for the epidemiological studies of depression scale. Center for the Epidemiological Studies of Depression Scale (CES-D^[57]) was used to assess current depressive symptoms. The measure was adapted for a Portuguese population by.^[58] The CES-D is a well-known 20-item inventory that measures the affective and somatic symptoms of depression. Scores may range from 0 to 60, with higher scores indicating more severe depression. Although the scale is typically used as a continuous measure, a score of 16 or higher is regarded as the clinical cutoff for at least a mild case of depression.^[57] The CES-D is well suited for administration to adults from the general population. Respondents are asked to indicate the frequency with which they have experienced each symptom over the past week using a 4-point rating scale (0–3). The CES-D has acceptable levels of internal consistency and convergent validity. Extensive evidence from a variety of samples attests to the psychometric properties of the CES-D.^[59] The Portuguese version^[58,60] presents good psychometric

characteristics. The Cronbach's α values varied between .87 and .92 in different samples. In the present sample, the α reliability coefficient for the CES-D was .88.

RESULTS

DATA ANALYSIS STRATEGY

We used structural equation modeling (SEM)^[61] to examine the link between participants' perceptions of early relationships and their current depressive symptoms and the assumed mediating role of Self-Criticism and Dependency in this association. This allowed us to evaluate this association while assessing measurement errors in the dependent and independent variables. The SEM analyses were performed with the AMOS software (Version 4.0^[62]), using the maximum-likelihood method. Model fit was assessed using the following indices: χ^2 divided by degrees of freedom (χ^2/df), the Non-Normed Fit Index (NNFI), the Comparative Fit Index (CFI), and the Root Mean Square of Approximation (RMSEA). A model in which χ^2/df was ≤ 2 , CFI and NNFI were each greater than 0.95, and the RMSEA index was between .00 and .06 with confidence intervals between .00 and .08^[63] was deemed acceptable. These moderately stringent acceptance criteria clearly reject inadequate or poorly specified models while accepting for consideration models that meet real-world criteria for reasonable fit and representation of the data.^[77]

Table 1 presents the correlations between the study variables. These data depict the first-order correlations among each of the observed indicator variables that are not shown in the assessment of the relations among the latent construct and observed measures examined in the structural model presented in the figures.

Although the CES-D scale is typically used as a continuous measure, the following cut-off scores best approximate the severity stages of depression: 0–9, none or minimal; 10–16, mild; 17–24, moderate; and >24, moderate to severe. However, there is little specificity for CES-D cut offs or for other self report measures cut-offs in community samples, without other

TABLE 1. Intercorrelations

	1	2	3	4	5	M	SD
Early relationships							
1. PBI—maternal care	—					12.64	3.25
2. PBI—maternal overprotection	-.53***	—				5.67	3.03
Personality vulnerability							
3. DEQ—self-criticism	-.28***	.22**	—			-0.31	1.02
4. Dependency	.10	.06	-.11	—		-0.36	0.86
Depressive symptoms							
5. CES-D	-.26***	.20**	.43***	.16*	—	12.00	7.64

N = 200.

P* < .05; **P* < .01; *****P* < .001 (two-tailed).

¹The present study's model focuses on adults' perceptions' of their early relationships with their mothers, who were assumed to be the primary caregivers—a primary caregiver serves the role usually assumed by the mother (e.g.^[76])

and further screening and further assessment. In fact, 73% of our sample had none or minimal to mild levels, 18.5% had moderate levels, and 8.5% had scores of 24 or higher, so the overall level of moderate-to-severe depression in this sample was not elevated.

PARTICIPANTS' PERCEPTIONS OF EARLY RELATIONSHIPS AND THEIR CURRENT DEPRESSIVE SYMPTOMS

In order to examine the hypothesis that levels of Self-Criticism and Dependency mediate the association between participants' perceptions of early relationships and their current depressive symptoms, we followed Baron and Kenny's^[64] criteria for mediation. Using this strategy, we first analyzed the direct associations of participants' perceptions of early relationships with their depressive-symptoms scores. A model of the association between participants' perceptions of early relationships (defined as a latent factor), which included the link between perceived maternal care and overprotection, and their current depressive symptoms was specified and estimated. This model (see Fig. 1) has zero degrees of freedom, thus fit indices could not be estimated. As shown in Figure 1, low levels of maternal care and high levels of maternal overprotection significantly associated with increased depressive symptoms ($\beta = .31, t = 3.58, P < .0001$).

As can be seen in Table 1 the association between Self-Criticism (predictor) and CES-D scores (criterion) is stronger than between Dependency and CES-D scores. Moreover, while Self-Criticism is significantly associated with perceptions of early relationship scales, Dependency was not. Accordingly Dependency did not meet the criteria for mediation (i.e. demonstrating significant associations with the mediator) and therefore further analyses will focus on Self-Criticism.

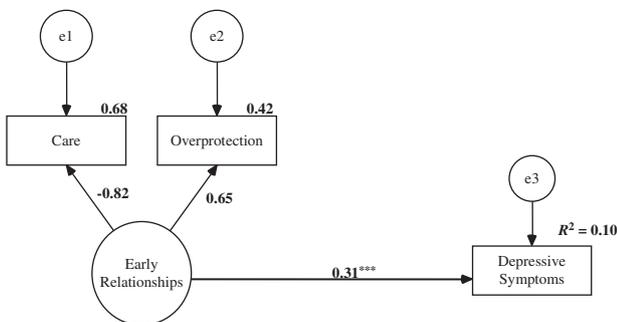


Figure 1. The direct association between early relationships and depressive symptoms. Rectangles indicate measured variables and the large circle represents a latent construct. Small circles reflect residuals (e). Bold numbers above or near endogenous variables represent the amount of variance explained (R^2). Unidirectional arrows depict hypothesized directional or links. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. *** $P < .001$ (two-tailed).

THE MEDIATING ROLE OF SELF-CRITICISM IN PARTICIPANTS' PERCEPTIONS OF EARLY RELATIONSHIPS AND THEIR CURRENT DEPRESSIVE SYMPTOMS

A model including the direct association between participants' perceptions of early relationships (defined as a latent factor and including low care and high overprotection) and their current depressive symptoms and the indirect association of these perceptions through their association with Self-Criticism was specified and estimated using SEM. This model (see Fig. 2) was found to fit the observed data perfectly: $\chi^2(1) = .00, P < .99, \chi^2/df = .00, NNFI = 1.0, CFI = 1.0, RMSEA = .000$ [CI 0.000, 0.000].

As shown in Figure 2, low levels of maternal care and high levels of maternal overprotection were significantly associated with increased Self-Criticism ($\beta = .34, t = 3.91, P < .0001$). Self-Criticism, in turn, significantly associated with increased depressive symptoms ($\beta = .37, t = 5.31, P < .0001$).

As shown in Figure 2, the significant association between participants' perceptions of early relationships and their depressive symptoms (shown in Fig. 1) decreased when Self-Criticism was included in the model presented in Figure 2 ($\beta = .19, t = 2.30, P < .05$). MacKinnon et al.'s^[65] z' test was used to examine the significance of the indirect relationship between the independent variable and the dependent variable via the hypothesized mediator. Our analyses indicate that the decrease in the coefficients of the direct

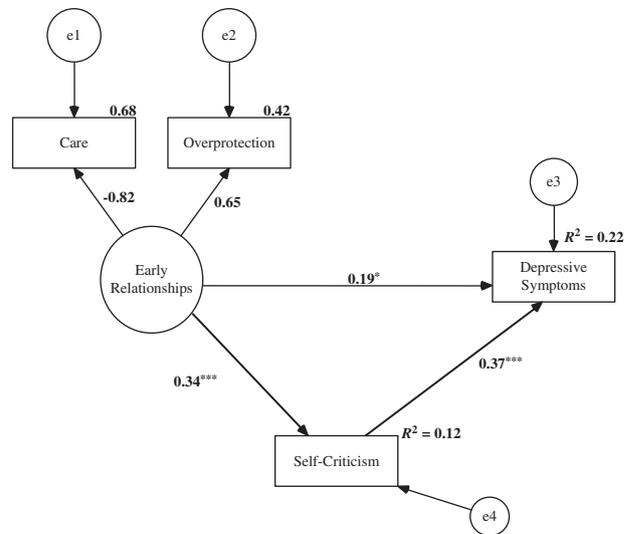


Figure 2. The direct and indirect associations between early relationships and depressive symptoms. Rectangles indicate measured variables and the large circle represents a latent construct. Small circles reflect residuals (e). Bold numbers above or near endogenous variables represent the amount of variance explained (R^2). Unidirectional arrows depict hypothesized directional links. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. $\Delta R^2 = 12\%$. * $P < .05$; *** $P < .001$ (two-tailed).

association between participants' perceptions of early relationships and their depressive symptoms, once Self-Criticism (the mediator) was controlled, was significant ($z' = 3.19, P < .01$).²

In order to test for the possibility that the differences related to sex (i.e. of mean scores and magnitude of associations) and age might affect the obtained results, we analyzed the models presented in Figure 2 including the association between sex, age, and early relationships as well as sex and age effects on self-criticism and on CES-D. The associations presented in Figure 2 were not altered and overall remained quite similar. Thus, we dropped sex and age in this analysis to simplify the presentations of the results. Finally, it is important to note that when participants with extreme levels of CES-D were excluded, the results reported in this study were not altered and overall remained quite similar.

DISCUSSION

This study examined the association between participants' perceptions of early dysfunctional practices within the mother-child relationship and their current depressive symptoms. Given the important role of Self-Criticism and dependency as vulnerability factors in depression, we examined the impact of early parental practices on the development of Self-Criticism and Dependency and their roles in depression in a non-clinical sample. As in other studies, results indicated that Self-Criticism is a stronger vulnerability factor to depression as compared to Dependency.^[30,34,35,66,78]

Our results indicate that early relationships characterized by low levels of caring and high levels of overprotection are associated with current levels of depression and Self-Criticism among adults. These results also indicate that high levels of Self-Criticism mediate the relationship between perceived early childhood experiences with mother and current depression.

Self-critical individuals are theoretically^[8] expected to be concerned about losing parental approval as a result of failing to meet the expectations that controlling, demanding and intrusive parents have set for them.^[14] The results of this study strengthen the evidence for the association between demanding, intrusive mother-child interaction, and the development of self-critical personality traits and depression. Vulnerability to depression may be associated with malevolent caregiving practices and the child's development of self-critical, introjective personality characteristics.^[8]

²To ensure that the Self-Criticism and depressive symptoms variables and the Self-Criticism and PBI mother scales do not essentially convey the same information, multicollinearity analyses were performed. Eigenvalues of the scaled and uncentered cross-products matrix, condition indices, and variance decomposition proportions, along with variance inflation factors (VIF) and tolerances from multicollinearity analyses, indicated the absence of multicollinearity. Thus, the measures of Self-Criticism and depressive symptoms and the measures of PBI Mother and Self-Criticism are not redundant.

These findings are consistent with both attachment and object-relations theory, which emphasize the unique role of the mother-child relationship in psychological development. According to the classical psychoanalytic view patterns of cognition, behavior and affection, established early in life, are central to interpersonal functioning and future psychological well-being.^[67] The parent-child relationship has extensive and lasting effects on emotional, social, and personal development, especially in depressed individuals.^[44] The central issue in childhood experiences of depressed adults seems not to be the loss of the object itself, but the experience of emotional deprivation.^[17,44] In introjective or self-critical depression, representations of self and of significant others are usually "fragmented, isolated, static, and ambivalent, and there is a [weak] resolution of the contradiction between separate images and properties"^[8] (p. 149).

The current findings regarding the role of Self-Criticism in depression are congruent with the accumulating research on Self-Critical vulnerability.^[6,68] Moreover, the findings regarding the role of malevolent early relationships in adult depression are congruent with object-relations theories that stress the importance of the maternal object for psychological development and psychopathology, namely depression^[6] as well as with Koestner et al.^[69] longitudinal findings about impact of mother's criticism on child's development of depression. Our findings are also congruent with attachment theory, which emphasizes the construction of internal working models as the result of early interactions and the effects of these interactions on psychological development, feelings of well-being, and psychopathology.^[6]

The results of this study confirm the hypothesized mediating role of self-criticism in the association between participants' perceptions of early relationships with their mothers and their current depressive symptoms. Research evidence indicates^[28,70] that the perception of an early malevolent relationship with one's mother is a predictor of the development of high levels of self-criticism,^[69] which, in turn, are associated with increased vulnerability to depression (for recent, extensive reviews of the link between self-criticism and negative parental characteristics, see refs.^[6,11]).

Finally, the results reveal no relationship between Dependency and the perception of early dysfunctional practices within the mother-child relationship. Thus, in accordance with previous studies that found that, it is self-criticism but not dependency which mediated the associations between insecurity of attachment and depression among nonclinical community sample of three generations,^[28] the findings of our study did not confirm the hypothesized mediating role of Dependency in the association between participants' perceptions of early relationships with their mothers and their current depressive symptoms. However, it is important to note that only recently, an important difference between dependency and self-criticism has emerged in

the literature. While the association between self-criticism and depression has been corroborated repeatedly in different contexts, dependency appears to entail both vulnerability and resilience components.^[30,34,35,66,78] The results of Shahar, Blatt, Zuroff, Kuperminc, and Leadbeater^[71] also show that Dependency is much less related with depression than self-criticism.

Research on these two vulnerabilities to depression has also distinguished positive or adaptive (mature) from negative or maladaptive (immature) aspects of Dependency. Analyses of the Dependency factor of the DEQ differentiated two sub-scales (^[10,12,26,72]): *Neediness*—preoccupation with abandonment and separation, feelings of being unloved, and fear of loss; and *Connectedness*—a mature and more reciprocal type of interpersonal concern about one’s relationship with particular significant others. Since Dependency can be considered a mix of adaptive/maladaptive components, in an ancillary analysis we explored the possibility that Neediness mediate the association between participants’ perceptions of early relationships with their mothers and their current depressive symptoms. Results indicated significant associations between Neediness and depression ($r = .40, P < .0001$) and between Neediness and maternal overprotection ($r = .22, P < .002$) but not with maternal care ($r = -.13, P < .08$). Regression analysis indicated that the significant association between perceived maternal over protection and current depressive symptoms ($r = .20, P < .004$) decreased and became nonsignificant ($\beta = .12, ns$) when Neediness was included in the model. Analyses indicate that the decrease in the coefficients of the direct association between participants’ perceptions of maternal over-protective relationships and their current depressive symptoms, once Neediness (the mediator) was controlled, was significant ($z' = 2.77, P < .005$). Thus, Neediness mediated this relationship but only when taking over protection into account (see Fig. 3). These results, in part, are in accordance with Blatt^[11,14] that an intense-dependent relationship or a distant and uncared relationship with the mother can both constitute a distal event for the occurrence of the anaclitic depression.

Important limitations of this study include its reliance on self-reported, retrospective measures of early relationships, which may give little insight into more complex processes of early relationships. Future studies should extend the present findings using other research designs and should employ more process-oriented procedures, including different interview techniques and projective techniques. The cross-sectional nature of this study limits any assignment of causality; our model cannot provide a definitive answer to the question of the direction of the observed associations. For example, depression might also be a confounding variable influencing the recollection of participant’s childhood experiences. However, the literature suggests that although mood may influence retrospective reporting, such reports are generally quite accurate.^[11,73] All the same, future research

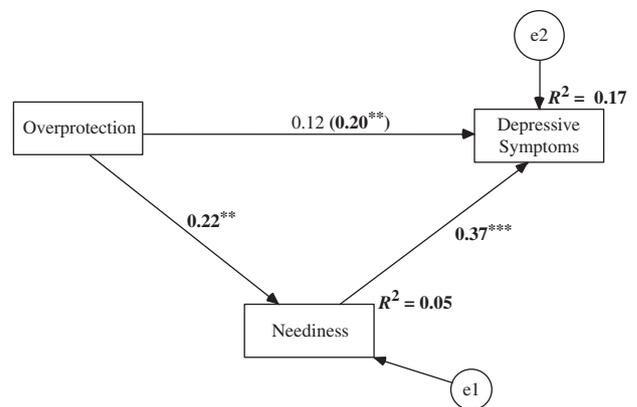


Figure 3. The direct and indirect associations between over-protective early relationships and depressive symptoms. Rectangles indicate measured variables and small circles reflect residuals (e). Unidirectional arrows depict hypothesized directional links. Standardized maximum likelihood parameters are used. Number in parenthesis is the β before the Neediness scores (assumed mediator) were entered into the model. Bold estimates are statistically significant. $\Delta R^2 = 13\%$. ** $P < .01$; *** $P < .001$ (two-tailed).

should look at these issues longitudinally. It should be noted that this study’s model focuses on adults’ perceptions’ of their early relationships with their mothers, who were assumed to be the primary caregivers. Further studies should examine both the possible effect of paternal care and overprotection as well as differential effects of paternal and maternal representations on adults’ current depression using both clinical and nonclinical samples. One could expect the group of adults who report negative experiences with both mother and father will be more vulnerable than those for whom the unsatisfactory relationship with the mother might be compensated by more satisfactory relationship with the father. Moreover, the inclusion of representations of additional significant others might extend our understanding of the relative importance and contribution of intrapersonal and interpersonal aspects of relationships and their possible effect on adults’ well-being. Finally, stability and variability of these perceptions should be taken into account in the design of further studies using longitudinal and age cohorts studies.^[74]

Despite its limitations, to the best of our knowledge, this study represents the first attempt to study perceptions of early relationships and the mediating role of self-criticism and dependency in depression specifically in a community sample as well as reporting findings concerning the mediating role of maladaptive dependency (neediness) in this association. Our findings highlight the importance of the need to include both interpersonal and intrapersonal processes in the investigation of depressive symptoms. The evidence that levels of self-criticism mediate the association between early relationships and depressive symptoms suggests that, in models of self and of significant others

for cases of insecure attachment, self-criticism is an active intrapsychic component of affective regulation.

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REFERENCES

1. Gerlsma C, Emmelkamp MG, Arrindell WA. Anxiety, depression, and perception of early parenting: a meta-analysis. *Clin Psychol Rev* 1990;10:251–277.
2. Parker G. Parental “affectionless control” as an antecedent to adult depression. *Arch Gen Psychiatry* 1983;48:956–960.
3. Parker G. Parental attachment and depressive disorders. In: Spertling MB, Perlman DL, editors. *Attachment in Adults: Theory, Life-Span Development and Treatment Issues*. New York, NY: Guilford; 1994:299–312.
4. Russek LG, Schwartz GE. Perceptions of parental caring predict health status in midlife: a 35 year follow-up of the Harvard Mastery of Stress Study. *Psychosom Med* 1997;59:144–149.
5. Blatt SJ. A cognitive morphology of psychopathology. *J Nerv Ment Dis* 1991;179:449–458.
6. Blatt SJ. *Polarities of Experience: Relatedness and Self-definition in Personality Development, Psychopathology, and the Therapeutic Process*. Washington, DC: American Psychological Association; 2008.
7. Blatt SJ, Zuroff DC. Interpersonal relatedness and self-definition: two prototypes for depression. *Clin Psychol Rev* 1992;12:527–562.
8. Blatt S. Levels of object representation in analectic and introjective depression. *Psychoanal Study Child* 1974;29:107–157.
9. Blatt SJ. Interpersonal relatedness and self-definition: two primary configurations and their implications for psychopathology and psychotherapy. In: Singer JL, editor. *Repression and Dissociation: Implications for Personality Theory, Psychopathology, and Health*. Chicago, IL: University of Chicago Press; 1990:299–335.
10. Blatt SJ. Representational structures in psychopathology. In: Cicchetti D, Toth SL, editors. *Emotion, Cognition, and Representation*. Rochester Symposium on Developmental Psychopathology. Rochester, NY: University of Rochester Press; 1995:1–33.
11. Blatt SJ. *Experiences of Depression: Theoretical, Research and Clinical Perspectives*. Washington, DC: American Psychological Association; 2004.
12. Blatt SJ, Zohar A, Quinlan DM, Luthar S, Hart B. Levels of relatedness within the dependency factor of the Depressive Experiences Questionnaire for adolescents. *J Pers Assess* 1996;6:52–71.
13. Blatt S, D’Afflitti J, Quinlan D. Experiences of depression in normal young adults. *J Abnorm Psychol* 1976;85:383–389.
14. Blatt S, Homann E. Parent–child interaction in the etiology of dependent and self-critical depression. *Clin Psychol Rev* 1992;12:47–91.
15. Blatt S, Maroudas C. Convergences among psychoanalytic and cognitive-behavioural theories of depression. *Psychoanal Psychol* 1992;9:157–190.
16. Blatt SJ, Quinlan DM, Chevron ES, McDonald C, Zuroff D. Dependency and self-criticism: psychological dimensions of depression. *J Consult Clin Psychol* 1982;50:113–124.
17. Blatt SJ, Wein SJ, Chevron E, Quinlan DM. Parental representations and depression in normal young adults. *J Abnorm Psychol* 1979;88:388–397.
18. Chevron ES, Quinlan DM, Blatt S. Sex role and gender differences in the experiences of depression. *J Abnorm Psychol* 1978;87:680–683.
19. Coyne JC, Whiffen VE. Issues in personality as diathesis for depression: the case of sociotropy–dependency and autonomy–self-criticism. *Psychol Bull* 1995;118:358–378.
20. Hokanson JE, Butler AC. Cluster analysis of depressed college students’ social behaviors. *J Pers Soc Psychol* 1992;62:273–280.
21. Nietzel MT, Harris MJ. Relationship of dependency and achievement/autonomy to depression. *Clin Psychol Rev* 1990;10:279–297.
22. Zuroff DC, Moskowitz DS, Wielgus MS, Powers TA, Franko DL. Construct validation of the dependency and self-criticism scales of the Depressive Experiences Questionnaire. *J Res Pers* 1983;17:226–241.
23. Besser A. Self- and best friend assessments of personality vulnerability and defenses in the prediction of depression. *Soc Behav Pers* 2004;32:559–594.
24. Besser A, Flett GL, Davis R. Self-criticism, dependency, silencing the self, and loneliness: testing for a mediational model. *Pers Individ Diff* 2003;35:1735–1752.
25. Besser A, Guez J, Priel B. The associations between self-criticism and dependency and incidental learning of interpersonal and achievement words. *Pers Individ Diff* 2008;44:1696–1710.
26. Besser A, Priel B. Trait vulnerability and coping strategies in the transition to motherhood. *Curr Psychol* 2003;22:57–72.
27. Besser A, Priel B. A multisource approach to self-critical vulnerability to depression: the moderating role of attachment. *J Pers* 2003;71:515–555.
28. Besser A, Priel B. The apple does not fall far from the tree: attachment styles and personality vulnerabilities to depression in three generations of women. *Pers Soc Psychol Bull* 2005;31:1052–1073.
29. Besser A, Priel B. Interpersonal relatedness and self-definition in late adulthood depression: personality predispositions and protective factors. *Soc Behav Pers* 2005;33:351–382.
30. Besser A, Priel B. Personality vulnerability, low social support, and maladaptive cognitive emotion regulation under ongoing exposure to terrorist attacks. *J Soc Clin Psychol* 2010;29:166–201.
31. Besser A, Priel B, Flett GL, Wiznitzer A. Linear and nonlinear models in vulnerability to depression: personality and postpartum depression in a high-risk population. *Individ Diff Res* 2007;5:1–29.
32. Flett GL, Hewitt L, Endler NS, Bagby RM. Conceptualization and assessment of personality factors in depression. *Eur J Pers* 1995;9:309–350.
33. Klein DN. The Depressive Experiences Questionnaire: a further evaluation. *J Pers Assess* 1989;53:703–715.
34. Priel B, Besser A. Vulnerability to postpartum depressive symptomatology: dependency, self-criticism and the moderating role of antenatal attachment. *J Soc Clin Psychol* 1999;18:240–253.
35. Priel B, Besser A. Dependency and self-criticism among first-time mothers: the roles of global and specific support. *J Soc Clin Psychol* 2000;19:437–450.
36. Quimette PC, Klein DN. Convergence of psychoanalytic and cognitive-behavioral theories of depression: an empirical review and new data on Blatt’s and Beck’s models. In: Masling JM, Bornstein RF, editors. *Psychoanalytic Perspectives on Psychopathology*. Washington, DC: American Psychological Association; 1993:191–223.
37. Robins CJ, Hayes AM, Block P, Kramer RJ, Villena M. Interpersonal and achievement concerns and the depressive vulnerability and symptom specificity hypothesis: a prospective study. *Cogn Therapy Res* 1995;19:1–20.
38. Levy KN, Blatt SJ, Shaver PR. Attachment styles and parental representations. *J Pers Soc Psychol* 1998;74:407–419.
39. Zuroff DC, Fitzpatrick D. Depressive personality styles: Implications for adult attachment. *Pers Individ Diff* 1995;18:253–365.

40. Reis S, Grenyer BFS. Pathways to anaclitic and introjective depression. *Psychol Psychopathol Theory, Res Pract* 2002;75: 445–459.
41. Burbach DJ, Borduin CM. Parent-child relations and the etiology of depression: a review of methods and findings. *Clin Psychol Rev* 1986;6:133–153.
42. Schwartz JC, Zuroff DC. Development and validation of the Schwarz-Zuroff love inconsistency scale. Unpublished manuscript, University of Connecticut; 1991.
43. McCraine EW, Bass JD. Childhood family antecedents of dependency and self-criticism: implications for depression. *J Abnorm Psychol* 1984;93:3–8.
44. Quinlan DM, Blatt SJ, Chevron ES, Wein SJ. The analysis of description of parents: identification of a more differentiated factor structure. *J Pers Assess* 1992;59:340–351.
45. Parker G, Tupling H, Brown LB. A parental attachment instrument. *Br J Med Psychol* 1979;52:1–10.
46. Zuroff DC, Igreja I, Mongrain M. Dysfunctional attitudes, dependency, and self-criticism as predictors of depressive mood states: a 12-month longitudinal study. *Cogn Therapy Res* 1990; 14:315–326.
47. Enns MW, Cox BJ, Larsen DK. Perceptions of parental bonding and symptom severity in adults with depression: mediation by personality dimensions. *Can J Psychiatry* 2000;5:263–268.
48. Soenens B, Vansteenkiste M, Luyten P. Toward a domain-specific approach to the study of parental psychological control: distinguishing between dependency-oriented and achievement-oriented psychological control. *J Pers* 2010;78:217–256.
49. Blatt S, D'Afflitti J, Quinlan D. Depressive Experiences Questionnaire, Unpublished manual, Department of Psychology, Yale University, New Haven, CT; 1979.
50. Campos RC. Adaptação do Questionário de Experiências Depressivas (de Sidney Blatt e colegas) para a população portuguesa. *Análise Psicológica* 2000;18:285–309. [Adaptation of the Depressive Experiences Questionnaire (Sidney Blatt et al.) for the Portuguese population.]
51. Campos RC. Questionário de Experiências Depressivas: Manual. Évora, Portugal: Edição do Departamento de Psicologia da Universidade de Évora [Depressive Experiences Questionnaire: Manual]; 2009.
52. Zuroff DC, Quinlan DM, Blatt SJ. Psychometric properties of the Depressive Experiences Questionnaire in a college population. *J Pers Assess* 1990;55:65–72.
53. Parker G. Parental Overprotection: A Risk Factor in Psychosocial Development. New York, NY: Grune & Stratton; 1983.
54. Chambers JA, Power KG, Loucks N, Swanson V. Psychometric properties of the Parental Bonding Instrument and its association with psychological distress in a group of incarcerated young offenders. *Soc Psychiatry Psychiatr Epidemiol* 2000;35:318–325.
55. Ramos V, Leal I, Maroco J. 2010. Escala de bonding parental (EBP). In: Leal I, Maroco eJ, editors. Avaliação em sexualidade e parentalidade. Porto, Portugal: LivPsic [Parental Bonding Instrument]; 2010:144–161
56. Hinde RA. Biological Bases of Human Social Behavior. New York, NY: McGraw-Hill; 1974.
57. Radloff LS. The CES-D scale: a self-report depression scale for research in the general population. *Appl Psychol Meas* 1977;1: 385–401.
58. Gonçalves B, Fagulha T. The Portuguese version of the Center for Epidemiologic Studies Depression Scale (CES-D). *Eur J Psychol Assess* 2004;20:339–348.
59. Eaton WW, Muntaner C, Smith C, Tien A, Ybarra M. Center For Epidemiologic Studies Depression Scale: review and revision (CESD and CESDR). In: Maruish ME, editor. The Use of Psychological Testing for Treatment Planning and Outcomes Assessment. 3rd ed. Mahwah, NJ: Erlbaum; 2004.
60. Gonçalves B, Fagulha T. Escala de Depressão do Centro de Estudos Epidemiológicos (C.E.S.-D). In: Gonçalves MM, Simões MR, Almeida LS, Machado C. (Coords.), *Avaliação psicológica: Instrumentos validados para a população portuguesa* (Vol. I). Coimbra, Portugal: Quarteto. [Center for Epidemiologic Studies Depression Scale (CES-D)]; 2003.
61. Hoyle RH, Smith GT. Formulating clinical research hypotheses as structural equation models: a conceptual overview. *J Consult Clin Psychol* 1994;62:429–440.
62. Arbuckle JL. AMOS: A Structural Equation Modeling Program. Chicago: Small Waters; 1999.
63. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Struct Equ Modeling* 1999;6:1–55.
64. Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations. *J Pers Soc Psychol* 1986;51: 1173–1182.
65. MacKinnon DP, Lockwood CM, Hoffman JM, West SG, Sheets V. A comparison of methods to test mediation and other intervening variable effects. *Psychol Methods* 2002;7: 83–104.
66. Blatt SJ, Zohar AH, Quinlan DM, Zuroff DC, Mongrain M. Subscales within the dependency factor of the Depressive Experiences Questionnaire. *J Pers Assess* 1995;64:319–339.
67. Westen D. Psychoanalytic approaches to personality. In: Pervin LA, editor. Handbook of Personality: Theory and Research. New York, NY: Guilford; 1990:21–65.
68. Besser A, Vliegen N, Luyten P, Blatt SJ. A psychodynamic perspective on depression. In: Hansson W, Olsson E, editors. *New Perspectives on Women and Depression*. New York: Nova Science Press; 2008:15–62.
69. Koestner R, Zuroff D, Powers T. Family origins of adolescent self-criticism and its continuity into adulthood. *J Abnorm Psychol* 1991;100:191–197.
70. Frost RO, Lahart CM, Rosenblate R. The development of perfectionism: a study of daughters and their mothers. *Cogn Therapy Res* 1991;15:469–489.
71. Shahar G, Blatt SJ, Zuroff DC, Kuperminc GP, Leadbeate BL. Reciprocal relations between depressive symptoms and self-criticism (but not dependency) among early adolescent girls (but not boys). *Cogn Res Therapy* 2004;28:85–103.
72. Rude SS, Burnham BL. Connectedness and neediness: factors of the DEQ and SAS dependency scales. *Cogn Therapy Res* 1995; 19:323–340.
73. Brewin C, Andrews B, Gotlib IH. Psychopathology and early experiences: a reappraisal of retrospective reports. *Psychol Bull* 1993;113:82–98.
74. Lizardi H, Klein DN. Long-term stability of parental representations in depressed outpatients utilizing the Parental Bonding Instrument. *J Nerv Ment Dis* 2005;193:183–188.
75. Besser A, Vliegen N, Luyten P, Blatt SJ. Vulnerability to postpartum depression from a psychodynamic perspective: systematic empirical base commentary on issues raised by Blum (2007). *Psychoanal Psychol* 2008;25:392–410.
76. Field T. Attachment and separation in young children. *Annu Rev Psychol* 1996;47:541–562.
77. Kelloway EK. 1998. Using LISREL for Structural Equation Modeling: A Researchers Guide. Thousand Oaks, CA: Sage.
78. Mongrain M. 1998. Parental representations and support-seeking behaviors related to dependency and self-criticism. *J Personality* 66:151–173.