

## PERCEIVED SOCIAL SUPPORT, MALEVOLENT MATERNAL REPRESENTATIONS, AND OLDER ADULTS' DEPRESSED MOOD

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We explored the associations between Malevolent Maternal Representations (ORI; Blatt, Chevron, Quinlan, Schaffer, & Wein, 1992) and levels of Depressed Mood among 147 community dwelling Israelis; older adults (ages 70–83) in good health, functioning well, and not requiring any form of assisted living. Depressed Mood was measured by the CES–D (Radloff, 1977) and the DACL (Lubin, 1965). High Malevolent Maternal Representations were associated with high levels of Depressed Mood; low perceived social support was found to mediate the association between high Malevolent Maternal Representations and high Depressed Mood. Findings suggest the clinical importance of perceptions of available social support for the study of older adults' mental health.

Recent studies have explored factors other than chronological aging that might account for an increase in the prevalence of depression as people

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age (see Rothermund & Brandtstadter, 2003). The present study investigated malevolent maternal representations and their association with depression among Israeli older adults, centering on the assumed mediating role of perceived social support in these associations.

Later life is a period in which negative life events rapidly accumulate and levels of physical and psychological dependence increase (Ryff, Singer, Love, & Essex, 1998). Increased rates of depression have been considered a result of the particular stresses and losses that characterize later life (Beekman, Copeland & Prince, 1999). The idea that perceived interpersonal bonds play an important role in the regulation of distress is basic to conceptualizations of perceived social support in general (e.g., Cohen & Syme, 1985; Priel & Shamai, 1995; Sarason, Pierce, & Sarason, 1990) and in later adulthood in particular (e.g., Antonucci, Fuhrer, & Dartigues, 1997; Kempen, van Sonderen, & Ormel, 1999; Penninx, Leveille, Ferrucci, van Eijk, & Guralnik, 1999). Studies have emphasized the role played by individuals' beliefs about the costs and benefits of seeking help as they affect the development and use of support resources (Vaux, 1992), and have also demonstrated the association between high perceived social support and improved physical and mental health outcomes during later adulthood (Cummings, Neff, & Husaini, 2003). Higher levels of social support have been associated with lower levels of depressive symptomatology in later adulthood, and have been found to buffer the effects of ill health, disability, bereavement, and other stressors (e.g., Besser & Priel, 2005; Wallsten, Tweed, Blazer, & George, 1999). Higher levels of social support have been linked both to greater psychological well-being (for example, self-efficacy, mastery, and decreased depressive symptomatology) and to reduced functional impairment (Antonucci et al., 1997; Kempen et al., 1999; Penninx et al., 1999). Moreover, older adults' dissatisfaction with social contacts and the perception of a lower level of available support strongly predict symptoms of depression (Antonucci et al., 1997; Fry, 1993).

Research on younger and middle-aged adults provides evidence of the negative association between internal working models or mental representations of early relationships and depression (Carnelley, Pietromanco, & Jaffe, 1994; Roberts, Gotlib, & Kassel, 1996). It has been suggested that a major mechanism involved in this association is the inability to use others as agents of affect regulation (Fuendeling, 1998). Using self-report questionnaires of recollections of cold and overprotective behaviors from parents, research also indicates associations between early experiences with parents and well-being in older age (Anderson & Stevens, 1993). Shaw, Krause, and Chatters (2004) demonstrated that a lack of emotional support from parents early in life, as measured with self-report sets of items from mailed questionnaire, is as-

sociated with increased depressive symptoms in adulthood, and that social relationships during adulthood account for much of this association. Extensive evidence suggests that access to social support is critical for the maintenance of health and well-being (e.g., Berkman, Vaccarino, & Seeman, 1993). This view is consistent with the assumption that interpersonal factors may play an important role in the onset and continuance of depression (reviewed in Joiner & Coyne, 1999). Accordingly, we assumed that perceptions of social support are a plausible link between mental representations of early relationships and depression in later adulthood.

Representation of early relationships with significant others is a basic construct in both psychoanalytic (Blatt, 1974; Kernberg, 1976; Lichtenberg, 1983; Mitchell, 1988; Stern, 1989) and attachment theories (Ainsworth, 1969; Bowlby, 1969). Moreover, there is accumulating empirical support for a link between attachment theory and psychoanalytic paradigms (see Bell & Bruscatto, 2002; Beulow, McClain, & McIntosh, 1996; Calabrese, Farber, & Westen, 2005; Levy, Blatt, & Shaver, 1998; Priel & Besser, 2001). Within these two theoretical frameworks, parental representations are assumed to structure responses to and expectations from others throughout life.

In the present study, representations of early relationships were evaluated within the context of the psychoanalytic theory of internalized early relationships. Internalized schemas of early relationships are conceptualized as motivational structures that guide perceptions and affect the organization of past experience and future prospects (Greenberg & Mitchell, 1983). Internalized relationships are assumed to affect interpersonal processes, motivations, and attitudes (Greenberg & Mitchell, 1983).

To evaluate representations of significant others, we used Blatt and colleagues' (Blatt, Bers, & Schaffer, 1993; Blatt et al., 1992; Blatt, Wein, Chevron, & Quinlan, 1979; Diamond, Blatt, Stayner, & Kaslow, 1992) procedures developed for the assessment of both the *content* and the *structure* of open-ended descriptions of significant others (e.g., parents). These content and structural dimensions of representations of early relationships have been scored at acceptable levels of reliability, and data from several studies indicate satisfactory validity (see Blatt's 2004 review). Internalizations of basic parental relational patterns have been studied empirically via the characterization of representations of parents, therapists, and other significant others (Blatt, Brenneis, Schimek, & Glick, 1976; Priel & Besser, 2001), via changes in these representations following long-term treatment (Blatt, Stayner, Auerbach, & Behrends, 1996), as well as via the maturational processes involved (Priel,

Myodovnik, & Rivlin–Beniaminy, 1995; Waniel, Besser, & Priel, 2006; Westen et al., 1991).

The relationship between the characteristics of internalized parental representations and depression was initially studied among younger adults (Blatt et al., 1979; Whisman & Kwon, 1992). Findings indicated significant relationships between depression and several aspects of parenting style and behavior. Specifically, perceptions of the parent as lacking in nurturance, support, and affection, as well as perceptions low in conceptual level, are associated with depression (see Blatt's 2004 review). In addition, perceptions of the availability of social support have been found to constitute a main mechanism involved in the continuity of the effects of basic internalized schemas of relationships. For instance, empirical studies of the relationships among perceived social support, retrospective estimation of the quality of early parental care, and overprotection indicate moderate associations between perceptions of social support and working models of self and others (Priel & Shamai, 1995; Vogel & Wei, 2005). Other studies indicate that mental representations of significant others forecast perceptions of specific supportive actions (e.g., Pierce, Baldwin, & Lydon, 1997). Similar results have been reported in attachment research (Collins & Feeney, 2004, Mallinckrodt & Wei, 2005). Anan and Barnett (1999) found that attachment security in children predicted perceived support and adjustment several years later. The main assumption of this line of research is that adults who lack the capacity for secure attachment (i.e., present more negative representations of early relationships) frequently also lack the skills required for adequate social functioning, for example the ability to recruit supportive friendships and clearly communicate needs (see, e.g., Mallinckrodt & Wei, 2005).

Research on social support has produced consistent evidence that a person's perception of the availability of others as a resource, rather than actual support received, plays an important role in the prediction of coping effectiveness, well-being, and psychological and physical health (Cohen & Syme, 1985; Hobfoll, Nadler, & Leiberman, 1986; Sarason, Sarason, & Pierce, 1990; Wethington & Kessler, 1986). This perception also plays an important buffering role in the prediction of coping effectiveness, well-being, and psychological and physical health across the life cycle (Cohen & Syme, 1985; Hobfoll, Nadler, & Leiberman, 1986; Sarason, Sarason, & Pierce, 1990; Wethington & Kessler, 1986).

Recently, studies of attachment using social relations model analysis (SRM; Buist, Dekovi, Meeus, & Aken, 2004; Cook, 2000) have shown an alternative pattern of associations: Attachment measures are conceptualized as composed of both intrapersonal and interpersonal influences, with intrapersonal influences representing only a relatively small part of

the meaningful variance in depressive symptoms. Moreover, recent estimates (Branje, van Lieshout, & van Aken, 2004) indicate that perceived support is mainly an interpersonal construct. These findings also suggest that the associations among the interpersonal aspects of mental representations, social support, and depressed mood may be bidirectional. Not only do social support and malevolent mental representations precipitate depression, but depressed individuals may play a role in provoking their own unsupportive environment. Cohen, Towbes, & Flocco (1988) reported that responses to perceived social support questionnaires contain mood-related response bias. Nondepressed individuals and those who perceive that they have high social support might positively bias their recollections of early relationships; moreover, the quality of current relationships might affect recollections of early relationships as well as levels of depressed mood.

Based on recent findings regarding the effects of a supportive environment on internal working models of relationships (e.g., Branje et al., 2004), in the present study we assumed that older adults' perceived social support might associate both with positive recollections of early relationships and with lower depression levels (Figure 1). Alternative plausible models, involving long-term longitudinal designs, might emphasize either the trait role of malevolent maternal representations, viewing these as producing low levels of perceived social support that would in turn lead to symptoms of depression, or assume that depressive symptoms might lead to more negative perceptions of support that in turn would negatively bias early representations of relationships. Although the direction of the association between mental representations of early relationships and depression symptoms cannot be tested in a cross-sectional design, we expected that this association would be significantly reduced in the presence of social support (as shown in Figure 1 by the dashed line).

## METHOD

### PARTICIPANTS

The sample consisted of 147 community dwelling adults (72 men and 75 women) in later adulthood, aged 70 to 83 ( $M = 72.05$ ,  $SD = 3.52$ ), recruited from an urban area in southwest Israel. Participants were white, relatively well-educated ( $M = 12.77$ ,  $SD = 3.29$ ), and reported only minor or no economic problems. Most (72%) were married. They were non-impaired individuals, highly independent in everyday living (IADL;  $M = 46.3$ ,  $SD = 8.22$ ) and in terms of the number of weekly leisure activities in which they participated (AADL;  $M = 9.33$ ,  $SD = 2.16$ ). Few participants

reported bad or poor health (1.4%), and they had few medical problems ( $M = 1.0$ ,  $SD = 1.01$ ). The majority of participants did not live alone (74.2%). Potential participants were contacted individually based on lists from "Golden Age Clubs" in community centers. All participants were volunteers. Only people able to read Hebrew and/or fluently comprehend spoken Hebrew were recruited. Of those approached, 80% agreed to take part in this study.

## MEASURES AND ASSESSMENTS

### Demographic and Background Questionnaire

Participants completed a demographic questionnaire indicating their date of birth, number of years of education, marital status (*married, separated/divorced, widowed, or never married*), economic problems (*none, minor, or major*) and whether they lived alone, with a family member, or with a caregiver not related to them. In addition, self-rated health was measured in two ways: (a) by asking participants to rate their current health compared with that of their peers, using a 4-point scale of 1 (*poor*), 2 (*average*), 3 (*good*), and 4 (*excellent*); and (b) by an open-ended question asking participants to report their medical problems, from which the number of illnesses afflicting them was determined. Finally, participants filled out the Instrumental Activity of Daily Living Scale (IADL; Lawton, 1971) so that we could assess their perceived level of independence in performing instrumental tasks of daily living, and the Advanced ADL (AADL; Baich-Moray, Zipkin, & Morginstein, 1994; Nir & Galinsky, 1998), which measures engagement in leisure activities in late adulthood.

### Dimensions of Object Representations

*Qualitative-Thematic Dimensions of Object Representations.* Participants' spontaneous open-ended descriptions of their mothers were analyzed using the Object Representation Inventory (ORI; Blatt et al., 1992), a method developed by Blatt and colleagues for the assessment of basic dimensions of parental representations. This semistructured interview is designed to obtain open-ended, spontaneous descriptions of significant others. In the present study, participants were asked, "Describe your mother."<sup>1</sup> The scoring procedure used in the current study included 12 qualitative dimensions, as well as the ambivalence and conceptual level of the description.

The qualitative aspects of parental representations are assessed by analyzing the descriptions according to the following content categories (scales) for the description of significant other: affectionate, ambitious,

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1. No participants reported that their mother died when they were young.

malevolent–benevolent, cold–warm, constructive involvement, intellectual, judgmental, negative–positive ideal, nurturant, punitive, successful, and strong–weak. These content categories are each rated on a 7–point scale that provides an assessment of the degree to which each characteristic is present in the description, based on the rater’s judgment of the subject’s view of the parental figure for each category (Blatt et al., 1992). This scoring procedure leads to three basic factors that assess the degree of *Benevolence*, the degree of *Punitiveness*, and the degree of *Ambitiousness*.

1. The Benevolence factor includes the following eight scales:
  - affectionate (the degree to which the person is described as having and displaying overt affection or warm regard; 1 = little affection; 7 = much affection<sup>2</sup>)
  - malevolent–benevolent (the degree to which the person’s intentions toward or effects on others are described as having or expressing intense ill will, spite, or hatred, rather than doing good or being disposed to doing good; 1 = malevolent; 7 = benevolent)
  - cold–warm (the degree to which the person’s interpersonal affective style is described as unemotional and impersonal rather than as warm and loving; 1 = cold; 7 = warm)
  - constructive involvement (the degree to which the person’s interactions with others are described as negative—either distant and reserved, or overinvolved—rather than as positive [constructive involvement with respect for other’s individuality]; 1 = disinterest or destructive, intrusive involvement; 7 = positive and constructive involvement with encouragement of autonomy and individuality)
  - negative–positive ideal (the degree to which the person is described as someone whom an individual wants to be like or emulate; the degree of admiration for qualities the person possesses; 1 = negative ideal; 7 = positive ideal)
  - nurturant (the degree to which the person is described as giving care and attention without making emotional demands, rather than seeking to have one’s own needs met; 1 = low nurturance; 7 = high nurturance)
  - successful (the extent to which the person is described as feeling satisfied with his or her own accomplishments, whatever those accomplishments might be; 1 = failure; 7 = success)

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2. The rating of affectionate is differentiated from the rating of warmth in that one can be warm without necessarily being overtly and demonstratively affectionate.

strong–weak (the extent to which the person is described as effective, efficient, and able to resist pressure and endure; as possessing a stable sense of self; and as appearing to be a consistent figure; 1 = extremely weak; 7 = extremely strong).

2. The Punitiveness factor includes the following three scales:
  - judgmental (the degree to which the person is described as holding critical or excessively high standards rather than as being accepting and tolerant; 1 = nonjudgmental; 7 = highly judgmental)
  - punitive (the extent to which the person is described as either physically or emotionally abusive and as inflicting suffering and pain; 1 = non-punitive; 7 = highly punitive)
  - ambivalent (the degree to which the subject reflects ambivalent or conflictual feelings about the person; the degree to which opposite feelings about the person are expressed. Ambivalence is characterized by the expression of confused, inconsistent feelings about the person, or having a mixed mind (1 = no ambivalence; descriptions are all positive or negative; 2 = some ambivalence; descriptions are primarily positive or negative with some indication of the opposite; 3 = moderate ambivalence; 4 = marked ambivalence; 5 = extreme ambivalence).
3. The Ambitiousness factor includes two scales:
  - ambitious (the degree to which the person is described as displaying aspirations in instrumental or occupational domains for self and others; as having an ardent desire to achieve; as aspiring, driving, or exerting pressure on self and others; 1 = relatively non-ambitious and driving; 7 = strongly ambitious and driving of self and/or others)
  - intellectual (the extent to which the person is described as emphasizing study, reflection, speculation, interest in ideas, creative use of intellect, or a capacity for rational and intelligent thought and an appreciation for complexity; 1 = not at all intellectual; 7 = highly intellectual). In the present sample, Ambitiousness (i.e., the scores for the ambitious and intellectual scales) had a low response variance and in most cases could not be scored. Consequently, only the Benevolence and Punitiveness factors were used in the following analyses.

*Structural Characteristic.* The main structural characteristic of the maternal representations is evaluated through the Conceptual Level scale (CL), which measures the degree of abstraction and complexity with which the person is perceived, ranging from sensorimotor and concrete



levels of representations to abstract and complex levels. This scale addresses the extent to which the description is well-integrated and includes internal-state attributes, regardless of the description's content. The points on the 9-point scale that represent stages are: 1 (sensorimotor descriptions of the person as a need-fulfilling agent), 3 (concrete perceptual descriptions of the person), 5 (iconic descriptions based on external characteristics of the person), 7 (iconic descriptions based on internal characteristics of the person), and 9 (conceptual descriptions based on abstract and enduring characteristics of the person). This scale, which is based on developmental, cognitive, and psychoanalytic concepts, was used to evaluate the cognitive-developmental, or conceptual, level of the descriptions (Blatt, 1974; Blatt et al., 1979).

This method of assessing object relations representations has been found to be reliable (see the following reviews: Blatt, 2004; Blatt, Wiseman, Prince-Gibson, & Gatt, 1991; Bornstein, Galley, & Leone, 1986; Fishier, Sperling, & Carr, 1990). The construct validity of this method is supported by research on psychopathology and psychodynamic treatment (Blatt, Auerbach, & Levy, 1997; Marziali & Oleniuk, 1990), and the developmental dimensions of the model have been confirmed (Priel & Besser, 2001; Priel, Kantor, & Besser, 2000; Priel et al., 1995). In addition, independent estimates of therapeutic change have been found to correlate with changes in the structural and qualitative dimensions of parental and self-representations (Gruen & Blatt, 1990).

In the present study, all maternal descriptions (which were transcribed verbatim by the interviewer) were scored by two independent, trained raters, blind to the study aims, participant demographics, and other reports. Interrater agreement was measured using the intraclass correlation reliability coefficient (ICC; Shrout & Fleiss, 1979). Coders achieved a sufficient level of agreement for each of the 12 content categories, ambivalence scale, and CL scale (ICCs > .70; Shrout & Fleiss, 1979). Interrater Pearson correlation coefficients for the individual items/scales used (12 content categories, ambivalence scale, and CL scale) ranged between .80 and .95. When coders did not agree, the mean score was used. However, if one of the coders thought a category was nonscorable for a subject and the other scored it, or when score discrepancy was more than two points, a third judge who was a clinical psychologist and an expert on the ORI determined the rating. Finally, when the two coders agreed that a specific category was nonscorable for a subject, the subject's mean score on the factor was used as the score for that category.<sup>3</sup> Cronbach's  $\alpha$  internal consis-

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3. In the present study, the overall incidence of nonscorable categories was less than 1%.

tency reliability coefficients were .89 and .84 for the individual items of the Benevolence and Punitiveness factors, respectively.

### **Depressed Mood**

Depressed mood was operationalized via two measures, the Center for Epidemiological Studies Depression scale (CES-D; Radloff, 1977; Radloff & Teri, 1986), which measures signs and symptoms of depressed mood during the past week, and the Depression Adjective Check List (DACL; Lubin, 1965), which measures depressed mood of a less transient nature.

*CES-D.* The CES-D (Radloff, 1977; Radloff & Teri, 1986) consists of a list of 20 items, each of which a person marks as being either not at all true of them, true on one or two days, true on three to five days, or true almost always during the past week. Cronbach's  $\alpha$  for the CES-D has been found to be .85 in a general population and .90 in a psychiatric population, and the scale has been found to correlate significantly with several other measures of depression, including the Beck Depression Inventory. The CES-D significantly discriminates members of the general population who express the need for counseling from those who do not. In the present sample, the Cronbach's  $\alpha$  obtained was .84.

*DACL.* The DACL (Lubin, 1965) is an adjective checklist in which a person checks adjectives that are descriptive of self. Negative adjectives (e.g., "blue") that are checked and positive adjectives (e.g., "happy") that are not checked are totaled to arrive at a final DACL-Negative score (NA). Positive adjectives that are checked and negative adjectives that are not checked are totaled to arrive at a final DACL-Positive score (PA). The DACL has been found to have acceptable internal consistency and concurrent validity in its original form, when translated into a number of other languages (Lubin & Collins, 1985; Lubin, Natalicio, & Seever, 1985), and when applied to special populations (e.g., Giambra, 1977; Sokoloff & Lubin, 1983). In the present sample, the Cronbach's  $\alpha$  obtained was .88.

### **Perceived Social Support**

Older adults' perceptions of perceived social support were determined using a 7-item measure developed by Shuval, Fleishman, and Shmueli (1982; Fleishman, 1996). The self-administered questionnaire contains items measuring aspects of social relationships, including questions regarding the informal support the person might receive from significant others (such as friends, family, and neighbors) when needed. Studies have shown that informal caregivers provide a wide variety of assistance, with emotional support often cited as the most common activity (e.g., Fleishman & Shmueli, 1984; Shuval et al., 1982). The seven items all focus on forms of perceived support that might be especially relevant for

older people (e.g., "visiting," "information," "assistance and support"). Participants were asked to rate each item on a 5-point scale from 1 (*low*) to 5 (*high*) regarding the support they might receive from significant others when needed. In the present study, the sum of the item scores was used to represent global perceived support, with high scores representing a high level of perceived availability of support. In a recent study of older adults in Israel (Besser & Priel, 2005), this measure was found to be reliable (Cronbach's  $\alpha = .84$ ) and to be negatively correlated with older adults' fear of death ( $r = -.26, p < .0001$ ) and depressive symptoms ( $r = -.50, p < .0001$ ). In the present sample, the Cronbach's  $\alpha$  internal consistency reliability coefficient was .83.

## PROCEDURE

Each eligible participant was met individually in his or her residence. Upon the interviewer's arrival, the participant completed the questionnaire packet, including the background questionnaire, the CES-D, the DACL, and the perceived social support measurements. After creating a comfortable atmosphere and rapport, participants were asked to tell about their mother, with no further specifications. Responses were recorded in writing verbatim by the interviewer. After each spontaneous description, the interviewer encouraged the participant in a nondirective way to expand his or her response (e.g., by saying, "Is there something else you would like to tell about your mother?"). The spontaneous answers to these questions constituted the narrative that was coded. If aspects of the description were unclear or ambiguous, participants were further probed. Answers to probes were not coded in themselves but used only to help code the spontaneous descriptions. In order to account for possible order effects, the questionnaires were presented in counterbalanced order. Also, the order of presentation among questionnaires, and between questionnaires and the descriptions of mothers, was randomized.

## RESULTS

### DATA ANALYSIS

The analysis was conducted in two stages. First, the *measurement* model of the study variables (Anderson & Gerbing, 1988) was confirmed. Second, structural equation modeling (SEM) was employed to examine the model proposed in Figure 1.

Analyses were conducted by means of the AMOS 4.01 program (Arbuckle, 1999). Model fit was assessed using the following indices:  $\chi^2$

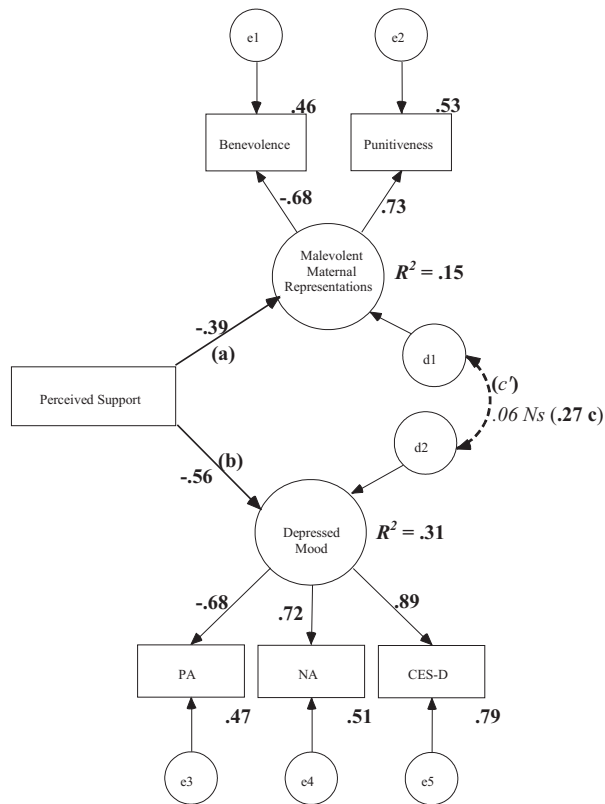


FIGURE 1. The Role of Perceived Social Support in the Association between Malevolent Maternal Representations and Depressed Mood.

*Note.* Rectangles indicate measured variables and large circles represent latent constructs. Small circles reflect residuals (e) or disturbances (d); bold numbers above or near endogenous variables represent the amount of variance explained ( $R^2$ ). Unidirectional arrows depict hypothesized directional, or “causal,” links. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. CES-D = Center for Epidemiological Studies Depression scale. PA = Depression Adjective Check List–Positive Adjectives. NA = Depression Adjective Check List–Negative Adjectives. The dotted path (c') indicates a significant drop in Path (c) when perceived social support is included in (a and b) the model,  $Z = 2.964, p < .003$ .

divided by degrees of freedom ( $\chi^2/df$ ), the Non-Normed Fit Index (*NNFI*; Bentler & Bonett, 1980), the Comparative Fit Index (*CFI*; Bentler, 1990), and the Root Mean Square of Approximation (*RMSEA*; Steiger, 1980).<sup>4</sup> In addition, as further tests of mediation, statistics were computed to examine the significance of the indirect relationships via the hypothesized mediator. The correlations among the variables and their means and standard deviations are presented in Table 1. Although in the present study we were interested in the *qualitative* construct of Malevolent Maternal Representations (the low Benevolence and high Punitiveness content factors), we also included scoring for the conceptual level (CL) of representations (a measure of cognitive/affective maturity), because the CL variable is a main component of representations of early relationships that has also been associated with depression in several studies (see Blatt's 2004 review). However, as can be seen in Table 1, in the present study, while both low Benevolence and high Punitiveness were significantly associated with both perceived social support (the assumed mediator) and depression (the outcome), the CL scores did not correlate significantly with depression or with perceived social support. Accordingly, CL did not fulfill the requirement for mediation and was therefore excluded from further analyses<sup>5</sup> (for requirements see Baron and Kenny's [1986] recommendations).

### Measurement Model

The Confirmatory Factor Analysis (CFA) yielded a very good fit ( $\chi^2 = 8.569$ ;  $df = 7$ ;  $\chi^2/df = 1.224$ ;  $p = .285$ ; *NNFI* = .97; *CFI* = .99; *RMSEA* = .04). Loadings of the manifest indicators on their respective latent variables (Malevolent Maternal Representations and Depressed Mood) were strong, in expected directions ( $\lambda_s = -.68$  and  $.73$  for Benevolence and Punitiveness, respectively, and  $.89$ ,  $-.68$ , and  $.72$  for CES-D, PA, and NA, respectively), and statistically significant ( $p < .0001$ ). Malevolent Maternal Representations were found to be significantly correlated with low

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4. Although a nonsignificant  $p$  value has traditionally been used as a criterion for not rejecting an SEM, this criterion is overly strict and sensitive for models with many variables (Kelloway, 1998). Therefore, in the present study, alternative criteria that reflect real-world conditions were also used. A model in which  $\chi^2/df$  was  $\leq 2$ , *CFI* and *NNFI* were greater than 0.90, and the *RMSEA* index was between 0.00 and 0.06 with confidence intervals between 0.00 and 0.08 (Hu & Bentler, 1998, 1999) 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 (Kelloway, 1998).

5. We also tested for the possibility that CL interacts with Punitiveness and Benevolence in the prediction of perceived social support and/or depression. No significant main or interaction effects were obtained.

TABLE 1. Correlations Among the Study Variables

Variables	1	2	3	4	5	6	7
1. Benevolence	—						
2. Punitiveness	-.49***	—					
3. Conceptual Level	.21*	-.34***	—				
4. Perceived Social Support	.27***	-.28***	0.03	—			
5. CES-D	-.14*	.23**	-0.05	-.49***	—		
6. PA	0.04	-0.09	0.12	.43***	-.60***	—	
7. NA	-.16*	0.11	-0.04	-.36***	.64***	-.49***	—
<i>M</i>	5.44	2.88	6.10	28.11	14.40	6.84	1.24
<i>SD</i>	1.02	1.47	1.42	3.49	9.75	3.28	2.27

Note. CES-D = Center for Epidemiological Studies Depression scale. PA = Depression Adjective Check List-Positive Adjectives. NA = Depression Adjective Check List-Negative Adjectives.  $N = 147$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed).

perceived social support ( $-.39, t = -3.051, p = .002$ ) and high Depressed Mood ( $.27, t = 2.256, p = .024$ ); perceived social support was found to be significantly associated with low Depressed Mood ( $-.56, t = -5.436, p = .0001$ ). Thus, significant associations obtained among Malevolent Maternal Representations, perceived support, and Depressed Mood.

It could be argued that malevolent descriptions (low Benevolence and high Punitiveness) are merely another measure of depression. Moreover, it could be argued that since perceived social support, Depressed Mood and Malevolent Object Representations are all measured by older adults' self-report, they share identical method variance, and thus could all be subsumed under a large latent construct: Older Adults' Perceptions. Accordingly, we tested a second measurement model in which the latent variable Older Adults' Perceptions was assessed by six indicators—the scores for Benevolence, Punitiveness, PA, NA, CES-D, and perceived social support—and contrasted this with the first measurement model. This model did not fit the data well ( $\chi^2 = 52.442; df = 9; \chi^2/df = 5.827; p < .0001; NNFI = .79; CFI = .82; RMSEA = .18$ ). Moreover, the fit of the measurement model of the three separate constructs was a significantly better representation of the empirical data than this measurement model,  $\Delta\chi^2 = 43.873, p < .0001$ . Thus, we showed that Malevolent Maternal Representations, Depressed Mood, and perceived social support, though correlated, are separate constructs.

After the acceptability of the measurement of the separate constructs (Malevolent Maternal Representations, Depressed Mood, and perceived social support) was verified, we proceeded to the next stage of analysis, namely, the testing of structural models.

### Mediational Effect Models

In order to examine which of the three variables affects the remaining two, three possible models were examined: (a) Depressed Mood associates with both perceived social support and Malevolent Object Representations and accounts for their association; (b) Malevolent Object Representations associate with both perceived social support and Depressed Mood and account for their association; and (c) perceived social support associates with both Depressed Mood and Malevolent Object Representations and accounts for their association.

These three SEM models, which are equivalent,<sup>6</sup> fit the data well ( $\chi^2 = 8.569$ ;  $df = 7$ ;  $\chi^2/df = 1.224$ ;  $p = .285$ ;  $NNFI = .97$ ;  $CFI = .99$ ;  $RMSEA = .04$ ). The first model indicated that although Depressed Mood affects both perceived social support ( $\beta = -.56$ ,  $t = -6.50$ ,  $p = .0001$ ) and Malevolent Maternal Representations ( $\beta = .27$ ,  $t = 2.36$ ,  $p = .018$ ), it does not account for their association, which remains significant ( $\beta = -.30$ ,  $t = -2.34$ ,  $p = .02$ ). The second model indicated that although Malevolent Maternal Representations affect both perceived social support ( $\beta = -.39$ ,  $t = -3.40$ ,  $p = .001$ ) and Depressed Mood ( $\beta = .27$ ,  $t = 2.17$ ,  $p = .03$ ), they do not account for their association, which remains significant ( $\beta = -.51$ ,  $t = -4.73$ ,  $p = .0001$ ). However, the third model indicates that perceived social support affects both Depressed Mood ( $\beta = -.56$ ,  $t = -7.05$ ,  $p = .0001$ ) and Malevolent Maternal Representations ( $\beta = -.39$ ,  $t = -3.27$ ,  $p = .001$ ) and accounts for their association: The association between Malevolent Maternal Representations and Depressed Mood becomes nonsignificant and approaches zero ( $\beta = .06$ , *ns.*).

The reduction of the association between Malevolent Object Representations and Depressed Mood, once perceived social support was controlled, was significant according to diverse statistical tests (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002): Sobel's  $Z = 2.964$ ,  $p < .003$  (Sobel, 1982); Goodman (I) test = 2.934,  $p < .0033$ ; Goodman (II) test = 2.995,  $p < .0027$ ). An estimate of the indirect effect of Malevolent Maternal Representations on Depressed Mood (or of the indirect effect of Depressed Mood on Maternal Representations) through perceived support was found to be significant ( $p < .002$ ; S.E. = .056; C.I. [0.118, 0.302]). According to these analyses, perceived social support almost completely (though not necessarily exclusively) mediates the association between Malevolent Maternal Representations and high Depressed Mood.

In sum, older adults high on Malevolent Maternal Representations tend to perceive a low availability of social support, which positively as-

6. Reversing the direction of specification of paths results in an equivalent model. For some models, the fit changes when paths are reversed, but for many others, the fit is the same. Therefore, theory must be used to determine causal direction.

sociates with increased levels of Depressed Mood. Alternatively, highly depressed older adults perceive a low availability of social support, which positively biases their reports of Malevolent Maternal Representations. A third possibility would be that Perceived availability of social support associates with both lower levels of Malevolent Maternal Representations and with levels of Depressed Mood. Although our cross-sectional design cannot determine directionality, our data clearly demonstrate that social support mediates the association between Malevolent Maternal Representations and Depressed Mood.

Finally, to explore possible effects of background variables, we added the ten background variables (age, gender, education, economic problems, marital status, living alone, IADL, AADL, subjective health, and medical problems) to the model presented in Figure 1. In adding them, we controlled for their intercorrelations, correlated them with perceived social support, and specified their effects on Malevolent Maternal Representations and on Depressed Mood. Results indicated that the model fit the data very well ( $\chi^2 = 47.421$ ;  $df = 37$ ;  $\chi^2/df = 1.282$ ;  $p = 0.117$ ;  $NNFI = .92$ ;  $CFI = .98$ ;  $RMSEA = .04$ ) and that the obtained results were not altered. Moreover, none of these variables was significantly correlated with Malevolent Maternal Representations. Among these variables, the only significant associations were subjective health with high perceived social support ( $\beta = .26$ ,  $t = 2.787$ ,  $p < .005$ ) and subjective health with low Depressed Mood ( $\beta = -.21$ ,  $t = -2.482$ ,  $p < .013$ ), indicating the robustness of our model. To obtain the most parsimonious model, we removed all statistically nonsignificant paths for background variables and left the significant effects of subjective health, adding it to the model presented in Figure 1. The final model fit the data very well ( $\chi^2 = 15.120$ ;  $df = 10$ ;  $\chi^2/df = 1.512$ ;  $p = .128$ ;  $NNFI = .95$ ;  $CFI = .98$ ;  $RMSEA = .05$ ).<sup>7</sup>

## DISCUSSION

The present study's results support Blatt and Homann's (1992) assumption that cognitive-affective schemas of close interpersonal relationships might play an important role in older adults' levels of depression, and broaden this assumption to include depression in older adulthood. Our findings extend the investigation of the association between malevolent internal representations and depression to the older adult population and suggest a plausible, very important mediating role for perceptions of social support. High levels of perceived social support

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7. To simplify the presentations of Figure 1, the significant associations of subjective health with high perceived social support ( $\beta = .26$ ) and with low Depressed Mood ( $\beta = -.21$ ) were removed from the Figure.



were found to account for the association between malevolent object representations and depressed mood, reducing older adults' high levels of depressed mood. Perceived social support might be conceptualized as including aspects of interpersonal past and present experiences and behaviors, as well as expressions of a person's self-regulating capacity. This last point is supported by Sarason et al.'s (1990) conceptualization of social support as a "sense of acceptance" (a belief that others accept us for what we are) that associates with the development of feelings of personal control and self-efficacy.

The present study's findings about the associations between perceived social support and depression among older adults who have malevolent maternal representations underscore the importance of accounting for both the intrapersonal and the interpersonal aspects of self-regulation of distress. Similar findings have been reported among clinically depressed younger populations. Low levels of benevolent object representations might create forms of interpersonal interaction that provoke negative interpersonal feedback, thus strengthening feelings of insecurity, which might in turn hinder communication strategies as well as intents to receive support. It is important to note here that while maternal representations form early in life, significant changes throughout the life span are to be expected. The present study's findings about the associations between malevolent maternal representations and depression in later life can be understood as related to the specific developmental tasks older adults face. The frequent exposure to significant separations and the increased dependency needs that characterize older adulthood might bring to the fore basic patterns of relatedness affecting individuals' experiences and behavior (Besser & Priel, 2005).

While associations between social support and internal representations were expected, questions about the direction of causality can only be answered using a longitudinal design that measures both social relationships and internal representations at different points in time throughout adulthood. Nevertheless, our findings have important practical implications for the treatment of depression in older adulthood, underscoring the role of current interpersonal environment as a main regulator of older adults' mood.

#### STUDY LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

A main methodological caveat to the present study is the exclusive use of self-report assessments. External assessments of behavior would be useful in this context. Also, interpretation of the findings of the present study should take into account the limitations of cross-sectional de-

signs; further longitudinal research is needed to explore the direction of causality over time. In addition, to ensure the generalizability of the findings and their interpretation, it is important to evaluate the measurement invariance of constructs and the stability of patterns of associations obtained in this study in different cohorts of older adults.

In future studies, it might be possible to test some of the hypotheses generated by this study's findings by observing the development of new relationships. Measures of internal representations of significant others could be obtained, and the quality of new relationships could be assessed as they develop across time. Another potential area of investigation is the direct assessment of personal stresses or critical events; the addition of these measures might further enhance the estimation of the relative contributions of intrapsychic and external aspects in the study of depression among older adults. It should be noted that the present study's model focuses on older adults' representations of their mothers, who were assumed to be the primary caregivers. Further studies should examine both the possible effect of paternal representations as well as differential effects of paternal and maternal representations on older adults' current relationships and depression. Moreover, the inclusion of representations of additional significant others (e.g., older adults' caregivers) might extend our understanding of the relative importance and contribution of intrapersonal and interpersonal aspects of relationships and their possible effect on older adults' well-being.

Further research is also required to investigate the lack of association found in the present study between the conceptual level of maternal representations and older adults' depression levels. This result differs from findings in younger populations and might be related to aspects of older adult cognitive function that still need to be evaluated.

#### CLINICAL IMPLICATIONS

The pattern of results obtained is congruent with Cook's (2000) conclusion that internal representations of relationship patterns might be affected by actual experiences. The population of older adults might benefit from a balanced perspective of individuals as interdependent rather than independent. Within the limits of self-reported data, our conclusion provides an optimistic base for intervention and prevention programs for older adults. Moreover, the pattern of findings revealed by the intervening effects of perceived social support might explain the effectiveness of intervention or prevention programs using group therapy or group work in old-age homes, recreation centers, and private offices (Grotjahn, 1977, 1989). Group work seems an additional appropriate method for the fostering of reliance on others' support; Group therapy

has been used extensively in treating the elderly for decades. It is cost effective and has been successful at countering the challenges faced by the elderly. Increase in the prevalence of depression as people age, might leads to social isolation, lowered self-worth, less social support, diminished social skills, and withdrawal. Group therapy may be helpful in countering this with social interaction, mutual support, and "reciprocal validation" (Huisani, Cummings, Kilbourne, & Roback, 2004, p. 295).

In conclusion, despite its limitations, the present study findings demonstrated the mediating role of social support in the association between Malevolent Maternal representations and Depressed Mood among older adults. These finding underscore the importance of accounting for both the intrapersonal and the interpersonal aspects of self-regulation of distress as well as the clinical importance of perceptions of available social support for the study of older adults' mental health.

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