

Maternal Personal Resources and Children's Socioemotional and Behavioral Adjustment

Michal Al-Yagon

Published online: 28 November 2007
© Springer Science+Business Media, LLC 2007

Abstract The study examined the role of three maternal personal resources [sense of coherence (SOC), attachment style, and social/emotional feelings of loneliness] in explaining children's socioemotional adjustment (self-rated loneliness and SOC, and mother-rated child behavior) and children's (self-rated) secure attachment. The sample included 58 mother–child dyads (27 boys and 31 girls) aged 8–11 years. Preliminary analyses indicated significant group differences between mothers with high or low scores on the two subscales of the attachment scale (i.e., avoidance and anxiety), on their SOC, and their social/emotional loneliness. Findings revealed that maternal SOC significantly contributed to all child socioemotional adjustment measures and attachment scores. In addition, the current findings demonstrated the role of maternal anxious attachment in explaining children's externalizing behaviors. Discussion focused on the unique value of maternal characteristics for understanding social and emotional adjustment among school-age children.

Keywords Attachment · Parenting · Sense of coherence · Social adjustment · Emotional adjustment

Introduction

Wide agreement exists among child development researchers that children's development is influenced by a variety of factors beyond parent–child relationships [1, 2]. Studies have emphasized the importance of examining the direct and indirect influences of a wide range of parental and child characteristics such as psychological, genetic-biological, social, and cultural factors [3, 4]. Moreover, research underscored that parents' psychological resources as well as their developmental histories directly influence childrearing quality and thereby child development [3, 5, 6].

M. Al-Yagon (✉)

Educational Counseling Program, School of Education, Bar-Ilan University, Ramat-Gan 52900, Israel
e-mail: alyagon@mail.biu.ac.il; alyagon@bezeqint.net

As argued by Belsky [5], among the three general sources of influence on parenting—the parent’s personality or psychological resources, the child’s individual characteristics, and contextual sources—the individual parent’s psychological resources are the most important determinant. According to Belsky’s model, to provide optimal childcare, parents must possess resources like the abilities for taking others’ perspectives, regulating impulses, feeling secure in their own lives, and finding ways to meet their own needs. Studies have focused on parental well-being, psychopathology, and personality, all assumed to render considerable influence on child development [1, 3, 7].

The present study followed this line of research and expanded on the role of three maternal personal resources: mother’s perceptions about her coping resources [i.e., sense of coherence (SOC)], representations of her attachment relationships, and feelings of social/emotional loneliness. This study attempted to examine the possible role of these variables in explaining children’s socioemotional and behavioral adjustment as well as in their attachment relationships with their mothers.

The first resource, SOC, was emphasized in recent studies as possibly explaining individuals’ mental health and coping with stressors [8–10]. The second resource, attachment, has gained growing awareness, particularly regarding the important contribution of adults’ attachment representations to their own psychological resources such as coping with distress and well-being [11, 12]. The third resource, loneliness, is an indicator of maternal dissatisfaction from her social interrelations. Previous studies demonstrated the role of social supports and social networks on parents’ ability to provide optimal childcare [13].

Maternal SOC

Sense of coherence comprises the core variable within Antonovsky’s [14, 15] salutogenetic health model of human functioning (in contrast to pathogenetic). This model examines individuals’ strategies and coping resources in dealing with the stressors produced by the human environment, which stem from sources such as genetic, microbiological, personal, economic, social, cultural, or geopolitical [16]. Antonovsky [15] defined SOC as a global orientation that expresses the extent to which an individual has a pervasive, enduring, though dynamic feeling of confidence that (1) the stimuli deriving from one’s internal and external environments are structured, predictable, and explicable; (2) resources are available to meet the demands posed by these stimuli; and (3) these demands are challenges worthy of investment and engagement.

Research has demonstrated [8, 10, 16] that persons with a high SOC level are less likely to perceive stressful situations as threatening or as provoking anxiety and anger and will be more likely to appraise such situations as manageable compared to individuals with low SOC. Furthermore, these studies and others [9, 17] considered SOC to be an indicator of resilience and personal strength, with unique value at times of distress.

Parents’ SOC may also hold unique importance for understanding their coping with stressors [18, 19]. However, most research on parental SOC has focused on parents of children with disabilities, who, as a group, reported a low SOC level compared to parents of non-disabled children [19–23]. Moreover, a low SOC among mothers of high-risk children was associated with the children’s low level of secure attachment as well as with a low level of family cohesion [20]. The scarcity of research on SOC among mothers of typically developing children calls for additional exploration.

Studies on children's own SOC have demonstrated that children's high level of coherence was associated with their secure attachment, as well as with their low levels of loneliness [24–26].

Attachment Theory and Parenting

The early parent–infant relationship has been conceptualized primarily within the framework of attachment theory [27–30]. Yet studies have indicated that attachment with significant others occurs over the lifespan of development (see [31] for a review).

Briefly, attachment theory emphasizes that infants develop a specific, enduring relationship with their primary caretakers [32]. Proximity to an available, supportive, and responsive caregiver (“attachment figure”) provides the infant with a sense of “secure base,” which refers to a set of expectations about others' availability and responsiveness in times of stress. Attachment figures play a central role in the infant's cognitive, social, and emotional development as well as in the development of a sense of self [30, 33]. Children's experiences with attachment figures are internalized into “working models of attachment”—a mental representation of the significant other and the self. These result in unique attachment styles, that is, stable patterns of cognitions and behaviors that are manifested in other close relationships and social interactions.

Attachment theory assumes that infants of available and supportive attachment figures are more likely to develop a sense of security and trust. Conversely, infants of unavailable, inconsistent, and/or unresponsiveness attachment figures are more likely to perceive the world as unpredictable, threatening, or rejecting.

Many studies have examined the relations between patterns of attachment and children's socioemotional and behavioral adjustment (for a review, see [34]). Most of these studies demonstrated that securely attached children clearly revealed better mental health and functioning, higher levels of psychological well-being, and more optimal signs of social and emotional adjustment than did children with an insecure style [35–38].

Attachment studies on adults have underscored the complexity of early attachment relationships' contribution to attachment patterns in adulthood. These studies [39] indicated that early attachment experiences are filtered through adults' current mental representations of attachment, thus influencing the construction of new attachment relations as well as parenting behaviors. Hence, adult attachment representations combine early experiences in close relationships with later relationships experienced with supportive others (i.e., spouse, good friends, or therapist) that may provide a sense of “secure base” for exploring and working through adverse childhood experiences [39–41].

Research has highlighted an association between adults' patterns of attachment and their caregiving as parents [42–45]. For example, Crowell and Feldman demonstrated that secure mothers were more supportive, provided more help, and communicated more warmly with their children as compared to insecure mothers. Similarly, van IJzendoorn's meta-analysis reported an association between maternal attachment representations and mothers' ability to provide responsive care to their offspring. Notably, both interview methods [46] and questionnaires [47] on adult attachment representations correlated with a variety of parental measures [48].

However, it should be noted that according to Bowlby [30], no direct link exists between the history of the parents' early attachment experiences and later parenting behaviors. Research has emphasized several vulnerability and protective factors that may mediate the association between early attachment and adult parenting [35, 39, 49]. The later relationships

experienced with supportive others that provide a sense of “secure base” have been considered to be a protective factor. On the other hand, some child characteristics such as developmental disabilities or difficult temperament may be considered a risk factor because they may affect parents’ ability to respond sensitively to the child’s needs. Social support and life stressors may be considered as either risk or protective factors, depending on their level.

Maternal Social and Emotional Loneliness

The loneliness experience may be considered a global indicator of dissatisfaction from the quality and/or the quantity of individuals’ social interrelations [50]. As emphasized by Peplau and Perlman [51], loneliness comprises unpleasant feelings that occur when individuals perceive a discrepancy between their desired and existing patterns of social networks. Research has emphasized that the loneliness construct consists of two dimensions, emotional loneliness and social loneliness, which emerge from different sources [52, 53]. Emotional loneliness refers to a deficiency in intimate close relations and interpersonal bonding and has been linked to insecure attachment relations with significant caregivers. Social loneliness reflects frustration related to the disruption of one’s social network and to the experience of peer rejection.

Studies on loneliness among parents are rare. However, many studies have examined parental quality and quantity of social relations, focusing on the impact of social supports and social networks on parents’ ability to provide optimal childcare [13, 54]. Findings from such studies indicated that supportive social and emotional relationships from family members and friends were related to adaptive parenting behaviors [1, 13]. Researchers found, for example, that the existence of a supportive social network reduced stress by serving as a buffer against threatening situations, decreased parental feelings of being overwhelmed by parenting tasks, contributed to parental coping strategies, provided emotional support, and furnished parents with additional community resources such as child-rearing advice and information [55, 56].

Studies have also demonstrated that high levels of social and emotional support in families were linked to children’s better social interactions, higher academic achievements, and overall enhanced social and emotional well-being [57]. In contrast, mothers who reported a high level of social isolation (limited social support and few friends) were more likely to perceive their children negatively and to engage in coercive interactions [58]. Lower levels of social support were also related to insecure attachment relationships in infants [55]. Thus, these outcomes in the literature pinpoint the unique potential value of exploring the underinvestigated role of maternal feelings of social and emotional loneliness in explaining adjustment and secure attachment among school-age children.

Taken together, parents’ ability to provide appropriate care may stem from their coping resources, their attachment style along with other moderating factors such as social support, life stressors, and child characteristics. Therefore, the current study focused on mothers’ perceptions about their coping resources (SOC) as well as maternal attachment and their emotional/social loneliness.

The Current Study

The purpose of this study was to extend research on the role of maternal personal resources in explaining children’s socioemotional and behavioral adjustment in a sample of mothers

and typically developing children, with a focus on three maternal characteristics: mother's SOC, the representation of her attachment relationships, and her feelings of social/emotional loneliness. The assessment of children's socioemotional and behavioral adjustment included internalizing aspects (loneliness, SOC, and internalizing behavior syndrome per Achenbach [59]) as well as externalizing aspects (externalizing behavior syndrome per Achenbach) and children's attachment style. Children's adjustment was examined here via self-report measures and maternal evaluations, in line with previous studies emphasizing the higher reliability found for children's self-reports than parental ratings on internalizing characteristics and the opposite outcomes for externalizing characteristics [60].

Along with the hypothesis that maternal secure attachment (low anxious attachment and low avoidant attachment) would contribute to the explanation of mothers' SOC and social/emotional loneliness, the present study also tested two other general hypotheses: (a) that maternal personal resources (mothers' SOC, mothers' attachment style, and loneliness) would contribute to the explanation of children's socioemotional adjustment (self-rated SOC, loneliness, and mother-rated child behavior measures) and (b) that maternal personal resources (SOC, attachment style, and loneliness) would contribute to the explanation of children's attachment relations.

Method

Participants

The sample consisted of 58 mother–child dyads. The 58 children, 27 boys and 31 girls, aged 8–11 years ($M = 9.32$, $SD = 1.02$), attended public elementary schools in urban areas of central Israel and were described by their mothers as exhibiting typical development without any emotional, behavioral, or learning difficulties.

The 58 mother ranged in age from 29 to 51 years ($M = 39.69$, $SD = 6.35$), and their education ranged from 10 to 20 years ($M = 14.01$, $SD = 2.27$). Regarding maternal marital status, 53 were married and 5 divorced. Regarding maternal work status, 45 worked full time and 13 did not work outside the home.

Instruments

Instruments Completed by Mothers

Mothers completed three self-report measures and one rating of their children's behavior.

Sense of Coherence Scale [15]: The short version of the self-reported SOC scale consisted of 13 statements on a 7-point Likert-type scale customized for the various items and ranging from never (1) to always (7). For example, mothers rated the statement "Doing the things you do every day is..." along a scale from *A source of pain and boredom* (1) to *A source of deep pleasure and satisfaction* (7). The maternal SOC score was obtained by summing the 13 items, where higher scores indicated a higher level of coherence. Confirmatory factor analyses indicated a single factor model for this scale [61]. In the current study, Cronbach alpha for internal consistency was .80.

Experiences in Close Relationships Scale [47]: The Hebrew adaptation of this self-report scale [62] consisted of 36 items tapping two dimensions: attachment anxiety

(18 items like “I worry a lot about my relationships”) and attachment avoidance (18 items like “I prefer not to show a partner how I feel deep down”). Mothers rated the extent to which each item described their feelings in close relationships on a 7-point scale ranging from *Not at all* (1) to *Very much* (7). The reliability and construct validity of the two subscales have been demonstrated [47]. In the current sample, Cronbach alphas were high for the 18 anxiety items (.80) and for the 18 avoidance items (.81). Two scores were computed by averaging items on each subscale. These scores were not significantly associated, $r(58) = .14, p > .05$, supporting Brennan et al.’s claim about the orthogonality of the anxiety and avoidance dimensions.

Emotional and Social Loneliness Scale [63]: This 10-item self-report scale consisted of two measures: social loneliness (5 items like “I don’t get much satisfaction from the groups I participate in”) and emotional loneliness (5 items like “I don’t have one specific relationships in which I feel understood”). Mothers rated each item on a 5-point Likert-type scale, ranging from *Never* (1) to *Very often* (5). The reliability and construct validity of the two subscales have been demonstrated [47]. In the current sample, Cronbach alphas for the two subscales were .70 and .65 for emotional and social loneliness subscales, respectively.

Child Behavior Checklist [59]: The Hebrew adaptation [64] of this standardized instrument for evaluating children’s behavior consisted of 112 items (and 1 open-ended item) scored on a 3-step response scale of: *Not true* (0), *Very true* (1), or *Often true* (2). Principal component analyses of the Child Behavior Checklist (CBCL) carried out by Achenbach [59] yielded eight narrow-band syndrome scales and two broad-band syndrome scales. The narrow-band syndrome scales referred to withdrawal, somatic complaints, anxiety/depression, social problems, thought problems, attention problems, delinquency problems, and aggression problems. Withdrawal, somatic complaints, and anxiety/depression formed the broad-band *internalizing* syndrome, whereas delinquency problems and aggressiveness problems formed the broad-band *externalizing* syndrome. In the current sample, Cronbach alphas for the broad-band syndrome scales were .84 for the internalizing scale and .92 for the externalizing scale. Cronbach alphas for the eight narrow-band syndromes ranged from .73 to .89. Higher CBCL scores indicated more maladaptive behaviors within the specific syndrome.

Instruments Completed by Children

Children completed three self-report measures.

Loneliness and Social Dissatisfaction Questionnaire [50]: The Hebrew adaptation [65] of this children’s self-report scale consisted of 16 primary items tapping a child’s feelings of loneliness (e.g. “I have nobody to talk to in my class,” “I am lonely”) and 8 filler items (e.g., “I like school”) that covered various activity areas. The scale asked children to read the items and to rate how frequently they experienced the feeling described in an item, on a 5-point scale ranging from *Never* (1) to *Always* (5). Asher et al. recommended the computation of a single total score tapping the global sense of loneliness. In the current sample, the high Cronbach alpha coefficient for the 16 items ($\alpha = .89$) allowed for the computation of a total loneliness score by summing up the 16 items. Higher scores reflected more frequent feelings of loneliness.

Children’s Sense of Coherence Scale [66]: This children’s self-report scale consisted of 16 items tapping three dimensions of children’s sense of confidence in the world: (a) sense of comprehensibility—feelings that one understands one’s environment (e.g., “I feel that I

don't understand what to do in class"); (b) sense of manageability—feelings of control and confidence that positive rewards are available (e.g., “When I want something I'm sure I'll get it”); and (c) sense of meaningfulness – motivation and interest in investing effort in different tasks (e.g., “I'm interested in lots of things”). Children rated how frequently they experienced the feeling described in an item, on a 4-point scale ranging from *Never* (1) to *Always* (4). Antonovsky [15] recommended the computation of a single total score tapping the global SOC. In the current sample, the acceptable Cronbach alpha for the 16 items ($\alpha = .75$) allowed for the computation of a total coherence score by summing up the 16 items. Higher scores reflected a higher SOC.

Attachment Security Style [67]: The Hebrew adaptation [68] of this children's self-report scale consisted of 15 items designed to assess children's perceptions of security in parent–child relationships in middle childhood and early adolescence. The items on this scale tapped the following: (a) the degree to which children believed a particular attachment figure to be responsive and available, (b) the children's tendency to rely on the attachment figure in times of stress, and (c) children's reported ease and interest in communicating with the attachment figure. Children rated the 15 items on a 4-point scale using Harter's [69] “Some kids ...other kids” format. Children were asked to read a statement such as “Some kids find it easy to trust their mom BUT other kids are not sure if they can trust their mom” and to choose which statement was more characteristic of them, and then to indicate whether the statement was *really true* for them or *sort of true* for them. Ratings on this 4-point scale were summed across the 15 items, to form an attachment security score ranging from 15 to 60. Higher scores indicated a more secure relationship. In line with Park and Hazan [70], a score of 45 served as a specific categorical cut-off point to distinguish secure from insecure child–mother attachment. In the current study, the Cronbach alpha for internal consistency was .71.

Procedure

School counselors in regular public elementary schools in urban middle-class neighborhoods in central Israel approached mothers of children in the third through sixth grades with no known problems in social, behavioral, or academic domains, and obtained mothers' consent to participate in the study. Graduate students in educational counseling underwent training to administer the test battery and visited the mothers and children individually in their homes. First, children completed the set of three child questionnaires alone in a quiet room. The order of the scales was randomized across participants. The examiner read sample items aloud for each questionnaire to ensure children's understanding and provided additional help if necessary. Second, the examiner explained each of the maternal instruments to the mothers, who completed them in a quiet room.

Results

The preliminary set of analyses below addressed the contribution of mothers' attachment to their SOC and social/emotional loneliness as well as the zero-order correlations among all variables included in the investigation. The second set of analyses below examined whether maternal personal resources contributed to children's socioemotional and behavioral adjustment as well as their secure attachment.

Preliminary Analysis

To test the contribution of maternal anxiety and avoidance in close relations (Experiences in Close Relationships Scale) to mothers' level of SOC and social/emotional loneliness, the mothers were first divided into high and low groups for each of the two attachment subscales. Medians of 2.67 for attachment anxiety and 2.86 for attachment avoidance enabled the division of the mothers into high and low groups for each subscale. Then a 2-way multivariate analysis of variance (MANOVA) was conducted (high/low on anxiety subscale X high/low on avoidance subscale) with the SOC scores and the social/emotional feelings of loneliness scores as the dependent variables. The MANOVA yielded a significant main effect for maternal affiliation to high/low attachment anxiety groups, $F(3, 52) = 4.82, p < .01$, and a significant main effect for maternal affiliation to high/low attachment avoidance groups, $F(3, 52) = 5.60, p < .01$. The interaction between anxiety and avoidance was not statistically significant. Univariate analyses of variance (ANOVAs) revealed significant main effects for maternal affiliation to high/low anxiety groups only on maternal SOC. As expected, an examination of group means indicated that mothers with high scores on the attachment anxiety subscale scored lower in SOC ($M = 72.10$ for mothers with low anxiety scores vs. $M = 63.30$ for mothers with high anxiety scores). The ANOVAs also revealed significant main effects for maternal affiliation to high/low avoidance groups only on maternal social and emotional loneliness. As expected, an examination of group means indicated that mothers with high scores on the avoidance attachment subscale scored higher in emotional loneliness ($M = 7.80$ for mothers with low avoidance scores vs. $M = 10.62$ for mothers with high avoidance scores) as well as higher in social loneliness ($M = 8.24$ for mothers with low avoidance scores vs. $M = 11.17$ for mothers with high avoidance scores).

Zero-order correlations among all the study's variables are presented in Table 1. Significant associations emerged between children's self-perceived loneliness and level of SOC and maternal evaluation of children's externalizing and internalizing behaviors. Children's loneliness was positively associated with maternal evaluation of children's externalizing and internalizing behavior problems. In contrast, children's SOC negatively associated with maternal evaluation of children's externalizing and internalizing behavior problems. No significant association emerged between children's self-rated attachment relations and maternal evaluation of behavior problems. In addition, significant interrelations emerged among all of the children's self-rated adjustment measures as well as among most of the mothers' measures.

Contribution of Maternal Personal Resources to Children's Adjustment

Separate multiple regression analyses were conducted to investigate the contribution of the maternal factors to each of the following child adjustment measures: SOC, loneliness, and the two broad-band CBCL syndrome scales (i.e., internalizing and externalizing behavior). The mothers' factors for each child measure included the following predictors: mothers' SOC, mothers' attachment scores on anxiety/avoidance, and maternal level of social/emotional loneliness.

With regard to children's SOC, the multiple regression revealed a significant contribution for the set of maternal predictors, $F(5, 53) = 4.32, p < .01$, which explained 30% of the variance. The regression analysis revealed a significant unique contribution for mothers' SOC (see Table 2). Children's higher level of coherence was explained by mothers' higher coherence.

Table 1 Correlation matrix of the assessed variables

	1	2	3	4	5	6	7	8	9	10
<i>Children's measures</i>										
1. Attachment										
2. Loneliness	-.49***									
3. Sense of coherence	-.53***	-.59***								
4. Externalizing problems	-.25	.27**	-.28*							
5. Internalizing problems	-.20	.49**	-.36**	.63***						
<i>Maternal measures</i>										
6. Avoidant attachment	.03	.21	-.10	.14	.08					
7. Anxious attachment	-.06	.28*	-.24	.47***	.30*	.13				
8. Sense of coherence	.41**	-.54***	.49***	-.47***	-.48***	-.31*	-.48***			
9. Emotional loneliness	.02	.10	-.21	.17	.28*	.47***	.27*	-.38**		
10. Social loneliness	-.01	.22	-.03	.20	.39**	.52***	.17	-.46***	.51***	–

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 Regressions testing the contribution of maternal factors to children's adjustment measures

Predictor: maternal factors	Children's factors							
	Sense of coherence		Loneliness		Externalizing		Internalizing	
	Standard β	T	Standard β	T	Standard β	T	Standard β	T
Avoidant attachment	-.01	-.07	.12	.88	.01	.12	-.22	-1.55
Anxious attachment	.03	.25	.04	.29	.32	2.40*	.09	.73
Sense of coherence	.59	3.90***	-.55	-3.71**	-.32	-2.20*	-.34	-2.40*
Emotional loneliness	-.14	-1.01	-.17	-1.17	-.05	-.37	.07	.59
Social loneliness	.30	1.93	-.09	.92	.02	.15	.28	1.87
Overall R^2	.30**		.32***		.30**		.31***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Similar findings emerged on the regression for children's feelings of loneliness. The set of maternal predictors contributed significantly, explaining 32% of the variance, $F(5, 53) = 4.68$, $p < .001$. The regression analysis revealed a significant unique contribution for mothers' SOC (see Table 2). Children's lower feelings of loneliness were explained by mothers' higher SOC.

With regard to children's internalizing and externalizing behavior (the two broad-band CBCL syndromes), multiple regression analyses also revealed a significant contribution for the set of maternal predictors. The multiple regression for the externalizing syndrome revealed a significant contribution for the set of predictors, $F(5, 53) = 4.47$, $p < .01$, which explained 30% of the variance. Pearson correlations (see Table 1) revealed significant associations between the child's externalizing behaviors and the mother's SOC as well as the mother's attachment anxiety. The regression analysis revealed a significant contribution for mothers' SOC and attachment anxiety (see Table 2). Children's lower level of externalizing behaviors was explained by mothers' higher SOC as well as by mothers' tendency to be less anxious in close relations with significant others.

The multiple regression for the internalizing syndrome revealed a significant contribution for the set of maternal predictors, $F(5, 53) = 4.61$, $p < .001$, which explained 31% of the variance. The regression analysis revealed a significant contribution only for mothers' SOC (see Table 2). Children's lower level of internalizing behavior problems was explained by mothers' higher SOC.

Contribution of Maternal Personal Resources to Children's Secure Attachment

To investigate the contribution of the maternal factors to children's secure attachment, a multiple regression analysis was performed with the following predictors: mothers' SOC, mothers' anxiety/avoidance attachment scores, and maternal level of social/emotional loneliness. The multiple regression revealed a significant contribution for the maternal factors, $F(5, 53) = 3.34$, $p < .01$, which explained 24% of the variance in children's attachment. The standardized regression coefficients revealed a similar outcome, emphasizing a significant unique contribution only for the mothers' SOC ($B = .62$, $p < .001$). Higher maternal perceptions of the world as comprehensible, manageable, and meaningful predicted the child's higher tendency to form securely attached relations.

Discussion

The current findings supported this study's hypotheses concerning the role of maternal personal resources in explaining socioemotional and behavioral adjustment as well as attachment security in school-age typically developing children. Beyond delineating the contribution of mothers' own patterns of attachment to their SOC and loneliness levels, the findings also provided important information about the role of the mother's SOC and her anxious attachment in her children's adjustment measures. With regard to the third maternal personal resource—perceived dissatisfaction from social interrelations (i.e., social/emotional loneliness)—the findings were at odds with our hypotheses, indicating that these variables did not play a significant role in explaining children's adjustment.

The findings yielded by the preliminary set of analyses clearly indicated that mothers' representations of their attachment relationships were associated with their SOC and feelings of social/emotional loneliness. Specifically, a maternal tendency to be less avoidant and less anxious in her close relations was associated with the mother's self-perceptions of greater personal strength and coping resources as well as of lower feelings of dissatisfaction from the quality and/or quantity of her social interrelations. These results resemble previous findings where securely attached adults manifested better mental health, functioning, and well-being than insecurely attached adults [11, 12]. Moreover, in line with Weiss [53], the current findings also revealed that a deficiency in intimate close relations and interpersonal bonding (i.e., emotional loneliness) was associated with high levels of anxiety and avoidance in close relationships.

Contribution of Mothers' Personal Resources to Children's Adjustment

The present examination of the contribution of maternal personal resources to each of the child adjustment measures studied—SOC, loneliness, and the two broad-band CBCL syndrome scales—clearly demonstrated the unique value of maternal SOC. Three out of these four socioemotional and behavioral adjustment measures were uniquely explained by higher maternal perceptions of the world as comprehensible, manageable, and meaningful: children's higher SOC, lower level of loneliness, and lower level of internalizing behaviors. In addition, children's lower level of externalizing behavior problems was explained not only by higher maternal SOC but also by mothers' tendency to be less anxious in close relations.

Overall, the current findings emphasized the unique role of SOC in explaining differences on all of the children's socioemotional and behavioral measures. As mentioned above, studies indicated that SOC has been considered an indicator of resilience and personal strength, and offers unique value in time of distress and crisis [9, 17]. However, most studies on adults' SOC focused on associations with aspects of the adults' own well-being and coping, whereas the current findings clearly revealed that mothers' high SOC (i.e., coping resources) contributed to their children's well-being. Presumably, mothers with high SOC, who tend to perceive stressful situations as less threatening and as more manageable, may provide their children with a more secure, consistent, and calm environment and also may model effective strategies to cope with stressors.

Furthermore, inasmuch as most research on parental SOC focused on parents of children with disabilities [20, 22, 23], the current findings may expand knowledge regarding the role of maternal SOC in children's typical development.

The mother's anxiety in her close relations (i.e., her negative self-representations and tendency to worry about rejection) also significantly contributed to the explanation of her child's externalizing syndrome, which refers to the child's aggressive behavior and delinquency problems. It should be noted that research on this association between mothers' attachment style and children's adjustment is rare. One possible explanation for this association may stem from the tendency to adopt hyperactivating attachment strategies shown by individuals with high scores on the attachment anxiety dimension [12]. Such strategies include intense appeals to attachment figures and continued reliance on them as a source of safety and support. Hyperactivation of the attachment system involves increased vigilance to threat-related cues and a reduction in the threshold for detecting cues about attachment figures' unavailability [28]. As a result, the attachment system is chronically activated, psychological pain related to the unavailability of attachment figures is exacerbated, and doubts about one's ability to attain safety and a sense of security are heightened [12]. Moreover, research has suggested that preoccupied parents may continue a primary focus on their own attachment experiences and therefore may be unable to attend to their child's attachment signals in predictable ways [45]. In addition, studies have indicated that mothers with insecure-anxious attachment attune inconsistently to children's positive and negative affect [43]. Taken together, the current findings may suggest that mothers' tendency to hyperactivate the attachment system may intensify children's externalizing behaviors by reducing the mothers' ability to provide consistent childcare. Moreover, a possible role may be played by maternal modeling of hyperactivating attachment strategies.

Contribution of Maternal Personal Resources to Children's Secure Attachment

The current results revealed a significant contribution to children's secure attachment only for mothers' SOC. Mothers' higher perceptions of the world as comprehensible, manageable, and meaningful predicted their children's stronger tendency to form securely attached relations. Interestingly, mothers' self-reports on their own attachment relations did not explain differences in their children's attachment patterns, thus corroborating other outcomes [71] for a control group of mothers and school-age children with typical development, as compared to children with learning disabilities. In contrast to the dyads with typically developing children, though, that study found that mothers' lower tendency toward avoidant close relations predicted a higher tendency for children with learning disabilities to form securely attached relations.

The current results did differ, however, from previous outcomes on the intergenerational transmission of attachment relations [see 45 for a review]. Methodological discrepancies may account for this: The present study examined maternal attachment using a written questionnaire—Experiences in Close Relationships Scale [47]—whereas most prior research used the Adult Attachment Interview [46]. Moreover, most research on the correspondence between children's and parents' attachment classifications focused on infants [39, 45, 72], whereas the current sample focused on school-age children's representations of their own attachment relations. In light of several recent studies that reported a mix of continuity and discontinuity in attachment from infancy to adolescence [73–75], further research should explore the contribution of the mother's representations of her own attachment relationships to her offspring's secure attachment at different ages among low-risk samples.

Implications, Limitations, and Directions for Future Study

The results of the present study hold theoretical and practical implications. The theoretical contribution focuses on three major issues: (a) the contribution of maternal personal resources in explaining differences in school-age children's socioemotional and behavioral adjustment; (b) the unique role of maternal SOC in contributing to children's socioemotional and behavioral adjustment as well as to children's secure attachment; and (c) the relevance and validity of attachment theory for explaining maternal loneliness and SOC.

The practical implications concern the possible implementation of the current findings regarding the contribution of maternal factors (SOC, attachment style, and social loneliness) to children's adjustment, in the development of effective interventions for school-age children. These interventions can target mothers of school-age children who manifest low scores on socioemotional and behavioral adjustment measures, and should aim to enhance mothers' own coping resources, specifically those related to the concept of SOC [15]. Such interventions may focus on enhancing maternal strengths by decreasing the maternal tendency to adopt attachment-activated strategies as well as enhancing maternal levels of comprehensibility, manageability, and meaningfulness in stressful situations. These interventions may also focus on increasing mothers' awareness concerning the possible potential risks of their own personal coping resources and strategies for their children's adjustment. Altogether, the present results may contribute to public policy for mental health services that offer prevention via identification of high-risk populations and appropriate treatments. Future studies attempting to develop such intervention programs should examine their effectiveness in buffering the socioemotional and behavioral problems of school-age children.

Several limitations of this study call for further research. First, although maternal loneliness was associated with other maternal personal resources, the finding that mother's loneliness did not contribute to children's adjustment calls for additional exploration, perhaps in conjunction with measures of maternal satisfaction from social support networks. Moreover, these data were gathered from a relatively small sample and focused on mothers' perspectives. Future investigations that focus on larger numbers of mothers and widen the scope to examine both mothers and fathers would help to strengthen the findings reported here. Furthermore, future research should examine the longevity of such perceptions over time and utilize qualitative interview methods to elaborate on these children's and parents' structured self-reports. In addition, further study would do well to tap children's adjustment measures from other resources such as teacher and peer assessments. Finally, the current descriptive study offers cross-sectional data. Future research should adopt longitudinal designs that examine the role of these maternal factors in explaining differences in children's socioemotional and behavioral adjustment, to improve understanding of the stability and changes from infancy to childhood regarding the impact of these maternal factors.

Summary

In sum, beyond delineating the contribution of mothers' own patterns of attachment to their own SOC and loneliness levels, the current study examined the role of these three maternal personal resources in explaining typically developing school-age children's socioemotional

and behavioral adjustment. Findings emphasized that maternal SOC significantly contributed to all child adjustment measures and attachment scores, and also that maternal anxious attachment played a significant role in explaining children's externalizing behavior problems. However, maternal perceived dissatisfaction from social interrelations did not significantly explain children's adjustment. The current results suggested the importance of developing empirically based interventions for mothers of school-age children who manifest low scores on socioemotional and behavioral adjustment measures, aiming to enhance mothers' own coping resources, specifically those related to the concept of SOC.

Acknowledgment The author would like to express her appreciation to Dee B. Ankonina for her editorial contribution.

References

- Campbell SB (2003) Behavior problems in preschool children: clinical and developmental issues. Guilford Press, New York
- Cummings EM, Davies PT, Campbell SB (2000) Developmental psychology and family process. Guilford Press, New York
- Belsky J, Barends N (2002) Personality and parenting. In: Bornstein MH (ed) Handbook of parenting, 2nd edn, vol 3. Erlbaum, Mahwah, pp 415–438
- Bronfenbrenner U (1979) The ecology of human development: experiments by nature and design. Harvard University Press, Cambridge
- Belsky J (1984) The determinants of parenting: a process model. *Child Dev* 55:83–96
- Parke DR (2004) Development in the family. *Ann Rev Psychol* 55:365–399
- Goodman SH, Gotlib IH (2002) Children of depressed parents. American Psychology Association, Washington
- Hart KE, Wilson TL, Hittner JB (2006) A psychosocial resilience model to account for medical well-being in relation to sense of coherence. *J Health Psychol* 11:857–862
- Lindstrom B, Eriksson M (2005) Salutogenesis. *J Epidemiol Commun Health* 59:440–442
- Marsh SC, Clinkinbeard SS, Thomas RM, Evans WP (2007) Risk and protective factors predictive of sense of coherence during adolescence. *J Health Psychol* 12:281–284
- Mikulincer M, Florian V (2001) Attachment style and affect regulation: implications for coping with stress and mental health. In: Fletcher G, Clark MS (eds) Blackwell handbook of social psychology: interpersonal processes. Blackwell, Oxford, pp 537–557
- Mikulincer M, Shaver PR (2004) Security-based self-representations in adulthood: contents and processes. In: Rholes WS, Simpson JA (eds) Adult attachment: theory, research, and clinical implications. Guilford Press, New York, pp 159–195
- Osofsky JD, Thompson MD (2000) Adaptive and maladaptive parenting: perspectives on risk and protective factors. In: Shonkoff JP, Meisles SJ (eds) Handbook of early childhood intervention, 2nd edn. Cambridge University Press, New York, pp 54–75
- Antonovsky A (1979) Health, stress and coping. Jossey-Bass, San Francisco
- Antonovsky A (1987) Unraveling the mystery of health. Jossey-Bass, San Francisco
- Antonovsky H, Sagy S (1986) The development of a sense of coherence and its impact on responses to stress situations. *J Soc Psychol* 126:213–225
- Greeff AP, Van Der Merwe S (2004) Variables associated with resilience in divorced families. *Soc Indic Res* 68:59–75
- Margalit M (1994) Loneliness among children with special needs: theory, research, coping and intervention. Springer, New York
- Oelofsen N, Richardson P (2006) Sense of coherence and parenting stress in mothers and fathers of preschool children with developmental disability. *J Intellect Dev Disabil* 31:1–12
- Al-Yagon M (2003) Children at-risk for developing learning disorders: multiple perspectives. *J Learn Disabil* 36:318–335
- Mak WWS, Ho AHY, Law RW (2007) Sense of coherence, parenting attitudes and stress among mothers of children with autism in Hong Kong. *J Appl Res Intellect Disabil* 20:157–167
- Margalit M, Raviv A, Ankonina DB (1992) Coping and coherence among parents with disabled children. *J Clin Child Psychol* 2:202–209

23. Olsson MB, Hwang CP (2002) Sense of coherence in parents of children with different developmental disabilities. *J Intellect Disabil Res* 46:548–559
24. Al-Yagon M, Mikulincer M (2004a) Patterns of close relationships and socioemotional and academic adjustment among school-age children with learning disabilities. *Learn Disabil Res Pract* 19:12–19
25. Al-Yagon M, Mikulincer M (2004b) Socioemotional and academic adjustment among children with learning disorders: the mediational role of attachment-based factors. *J Spec Educ* 38:111–123
26. Margalit M (1998) Sense of coherence and loneliness experience among preschool children with learning disabilities. *J Learn Disabil* 31:173–180
27. Ainsworth MD, Blehar MC, Waters E, Wall S (1978) Patterns of attachment: a psychological study of the strange situation. Erlbaum, Hillsdale
28. Bowlby J (1973) Attachment and loss: anxiety, anger, and separation. Basic Books, New York
29. Bowlby J (1982) Attachment and loss: attachment. Basic Books, New York (Originally published in 1969)
30. Bowlby J (1988) A secure base: clinical applications of attachment theory. Routledge, London
31. Cassidy J, Shaver PR (1999) Handbook of attachment: theory, research, and clinical applications. Guilford Press, New York
32. Ainsworth MD, Wittig BA (1969) Attachment and exploratory behavior of one-year-olds in a strange situation. In: Foss BM (ed) Determinants of infant behavior, vol 4. Methuen, London, pp 113–136
33. Waters E, Cummings EM (2000) A secure base from which to explore close relationships. *Child Dev* 71:164–172
34. Thompson RA (1999) Early attachment and later development. In: Cassidy J, Shaver PR (eds) Handbook of attachment: theory, research, and clinical applications. Guilford Press, New York, pp 265–286
35. Erickson MF, Sroufe LA, Egeland B (1985) The relationship between quality of attachment and behavior problems in a preschool high-risk sample. In: Bretherton I, Waters E (eds) Growing points in attachment theory and research. Monographs of the Society for Research in Child Dev 50(1-2, Serial No 209), pp 147–166
36. Greenberg MT, Speltz L, DeKlyen M (1993) The role of attachment in the early development of disruptive behavior problems. *Dev Psychopathol* 5:191–213
37. Lyons-Ruth K (1996) Attachment relationships among children with aggressive behavior problems: the role of disorganized early attachment patterns. *J Consult Clin Psychol* 64:64–73
38. Sroufe LA (1983) Infant-caregiver attachment and patterns of adaptation in preschool: the roots of maladaptation and competence. In: Perlmutter M (ed) Minnesota symposium in child psychology, vol 16. Erlbaum, Hillsdale, pp 41–81
39. van IJzendoorn M, Bakermans-Kranenburg MJ (1997) Intergenerational transmission of attachment: a move to the contextual level. In: Atkinson L, Zucker KJ (eds) Attachment and psychopathology. Guilford Press, New York, pp 135–170
40. Crowell JA, Fraley RC, Shaver PR (1999) Measurement of individual differences in adolescent and adult attachment. In: Cassidy J, Shaver PR (eds) Handbook of attachment: theory, research, and clinical applications. Guilford Press, New York, pp 434–465
41. Shaver PR, Mikulincer M (2002) Attachment-related psychodynamics. *Attach Hum Dev* 4:133–161
42. Crowell JA, Feldman SS (1991) Mothers' working models of attachment relationships and mother and child behavior during separation and reunion. *Dev Psychol* 27:597–605
43. Haft W, Slade A (1989) Affect attunement and maternal attachment: a pilot study. *Infant Mental Health J* 10:157–172
44. Lyons-Ruth K, Yellin C, Melnick S, Atwood G (2005) Expanding the concept of unresolved mental states: hostile/helpless states of mind on the adult attachment interview are associated with disruptive mother–infant communication and infant disorganization. *Dev Psychopathol* 17:1–23
45. van IJzendoorn M (1995) Adult attachment representations, parental responsiveness, and infant attachment: a meta-analysis on the predictive validity of the adult attachment interview. *Psychol Bull* 117:387–403
46. George C, Kaplan N, Main M (1985) The adult attachment interview. Unpublished protocol, Berkeley, Department of Psychology, University of California
47. Brennan KA, Clark CL, Shaver PR (1998) Self-report measurement of adult attachment: an integrative overview. In: Simpson JA, Rholes WS (eds) Attachment theory and close relationships. Guilford Press, New York, pp 46–76
48. Gillath O, Shaver PR, Mikulincer M (2005) An attachment-theoretical approach to compassion and altruism. In: Gilbert P (ed) Compassion: its nature and use in psychotherapy. Brunner-Routledge, London, pp 121–147
49. Eastbrooks MA (1989) Quality of attachment to mother and father: effects of perinatal risk status. *Child Dev* 60:825–830

50. Asher SR, Parkhurst JT, Hymel S, Williams GA (1990) Peer rejection and loneliness in childhood. In: Asher SR, Coie JD (eds) *Peer rejection in childhood*. Cambridge University Press, Cambridge, pp 253–273
51. Peplau LA, Perlman D (1982) Perspectives on loneliness. In: Peplau LA, Perlman D (eds) *Loneliness: a sourcebook of current theory, research and therapy*. Wiley, New York, pp 1–18
52. Buchholz ES, Catton R (1999) Adolescents' perceptions of aloneness and loneliness. *Adolescence* 34:203–213
53. Weiss RS (1973) *Loneliness: the experience of emotional and social isolation*. MIT Press, Cambridge
54. Cochran M, Niego S (1995) Parenting and social networks. In: Bornstein M (eds) *Handbook of parenting*. Erlbaum, Mahwah, pp 393–418
55. Crockenberg S (1981) Infant irritability, mother responsiveness, and social support influences on the security of infant–mother attachment. *Child Dev* 52:857–865
56. McLoyd VC (1995) Poverty, parenting and policy: meeting the support needs of poor parents. In: Fitzgerald H, Lester B, Zuckerman B (eds) *Children of poverty: research, health, and policy issues*. Garland Press, New York, pp 269–303
57. Gonzales NA, Cauce AM, Friedman RJ, Mason CA (1996) Family, peer, and neighborhood influences on academic achievement among African-American adolescents: one-year prospective effects. *Am J Community Psychol* 24:365–387
58. Wahler RG (1980) The insular mother: her problems in parent–child treatment. *J Appl Behav Anal* 13:207–219
59. Achenbach TM (1991) *Manual for the child behavior checklist: 4–18 and 1991 profile*. Department of Psychiatry, University of Vermont, Burlington
60. Ronen T (1997) *Cognitive-developmental therapy with children*. Wiley, Chichester
61. Hittner JB (2007) Factorial invariance of the 13-item sense of coherence scale across gender. *J Health Psychol* 12:273–280
62. Mikulincer M, Florian V (2000) Exploring individual differences in reactions to mortality salience: does attachment style regulate terror management mechanisms? *J Pers Soc Psychol* 79:260–273
63. Wittenberg MT (1986) *Emotional and social loneliness: an examination of social skills, attributions, sex role and object relations perspectives*. Unpublished doctoral dissertation, University of Rochester, New York
64. Zilber N, Auerbach J, Lerner Y (1994) Israeli norms for the Achenbach child behavior checklist: comparison of clinically-referred and non-referred children. *Israel J Psychiatry Relat Sci* 31:5–12
65. Margalit M (1991) Understanding loneliness among students with learning disabilities. *Behav Change* 8:167–173
66. Margalit M, Efrati M (1995) Sense of coherence, companionship, and loneliness among children with learning disorders. Paper presented at the annual conference of the Society for Research in Child Development, Indianapolis
67. Kerns KA, Klepac L, Cole A (1996) Peer relationships and preadolescents' perceptions of security in the child–mother relationship. *Dev Psychol* 32:457–466
68. Granot D, Maysless O (2001) Attachment security and adjustment to school in middle childhood. *Int J Behav Dev* 25:530–541
69. Harter S (1982) The perceived competence scale for children. *Child Dev* 53:87–97
70. Park KA, Hazan C (1990) Correlates of attachment security and self-worth on middle childhood. Paper presented at the international conference on personal relationships, Oxford
71. Al-Yagon M (2007) Socioemotional and behavioral adjustment among school-age children with learning disabilities: the moderating role of maternal personal resources. *J Spec Educ* 40:205–217
72. Belsky J, Rovine M, Taylor DC (1984) The Pennsylvania infant and family development project: II the development of reciprocal interaction in the mother–infant dyad. *Child Dev* 48:706–717
73. Hamilton CE (2000) Continuity and discontinuity of attachment from infancy through adolescence. *Child Dev* 71:690–694
74. Waters E, Merrick S, Treboux D, Crowell J, Albersheim L (2000) Attachment security in infancy and early adulthood: a twenty-year longitudinal study. *Child Dev* 71:684–689
75. Weinfeld NS, Sroufe LA, Egeland B (2000) Attachment from infancy to early adulthood in a high-risk sample: continuity, discontinuity, and their correlates. *Child Dev* 71:695–702