



Published in final edited form as:

Dev Psychopathol. 2001 ; 13(1): 165–182.

Developmental themes in women’s emotional experiences of motherhood

SUNIYA S. LUTHAR^a, KIMBERLY DOYLE^a, NANCY E. SUCHMAN^b, and LINDA MAYES^c

^aTeachers College, Columbia University

^bYale University School of Medicine

^cYale Child Study Center

Abstract

In this study, women’s levels of ego development and their psychological difficulties were examined in relation to feelings in the maternal role. The sample consisted of 91 mothers from diverse socioeconomic backgrounds. Ego development was assessed by the Washington University Sentence Completion Test, and psychological difficulties were operationalized by self-reported global symptomatology, maternal substance abuse, and expressed anger. Outcome variables included feelings of satisfaction, distress, and support in the maternal role, as well as the degree to which negative and positive emotions were integrated in response to hypothetical vignettes of challenging everyday child-rearing experiences. Hypotheses were that women at high levels of ego development would show greater deterioration in the presence versus absence of self-reported adjustment problems than would those at lower levels. A series of interaction effects each indicated trends consistent with the hypotheses. These results add to accumulating evidence that tendencies toward self-examination, characteristic of high developmental levels, do not inevitably serve protective functions but may be linked with heightened reactivity to negative intrapsychic forces.

The focus of this paper is on affective experiences of women in relation to their roles as parents. Prior child development research involving mothers has been overwhelmingly focused on women’s characteristics in relation to others, with studies of interactions with their children, attitudes toward them, or perceptions of them (see Belsky, 1984; Bornstein, 1995; Darling & Steinberg, 1993). With a few notable exceptions (e.g., Barnard & Martell, 1995; Levitt, Weber, & Clark, 1986), there has been little scientific attention to women’s own affective experiences in the maternal role.

In exploring potential determinants of women’s emotional experiences as mothers, a pivotal construct within this investigation is that of ego development. As conceptualized by Loewinger (1976), ego development is a “master” trait reflecting character development, which is related to various aspects of cognitive and interpersonal development but which represents more than any of them considered individually (Hauser, 1976). High levels of ego development generally connote a range of advantages in everyday adjustment, being associated, for example, with advanced levels of impulse control, interpersonal maturity, empathy, and moral development (Carlozzi, Gaa, & Liberman, 1983; Hauser, 1976, Hauser,

Powers, Noam, Jacobson, Weiss, & Follansbee, 1984; Noam, Hauser, Santostefano, Garrison, Jacobson, Powers, & Mead, 1984; Westenberg & Block, 1993; White, 1985).

While considering links between ego development and women's maternal affective experiences, of more interest than direct "main effect" associations in this study were potential interaction effects: those conditional on the women's levels of psychological disturbance. In all likelihood, mothers at high developmental levels feel more positive affect in their roles as parents (e.g., given their greater interpersonal maturity; see White, 1985). Looking beyond such main effect associations, however, it is also conceivable that high developmental level mothers would be *more* vulnerable than others in the presence of high levels of personal distress.

The plausibility of such conditional effects is reflected in Loevinger's theoretical descriptions of stages of ego development. Critical defining features of high ego development levels are predilections toward introspection, keen awareness of inner states, and willingness to acknowledge conflict (Loevinger & Wessler, 1983; Hy & Loevinger, 1996). It follows, then, that if intrapsychic experiences are largely negative in valence, individuals at advanced developmental levels could be affected more adversely than their less introspective, self-aware counterparts.

Conditional effects such as these have, in fact, been suggested in prior developmental psychopathology research with children. In a study involving inner-city adolescents, Luthar and Ripple (1994) found that intelligent youth appeared to react more adversely than their less intelligent peers to high levels of subjectively perceived depression and anxiety (see also Gjerde, 1995; Luthar, 1991). The authors interpreted their findings in terms of intelligent children's ostensibly high sensitivity to their inner distress, citing evidence that intelligence is highly related to ego development, a hallmark of which is awareness of inner conflict. The posited explanatory construct of ego development was not, however, directly assessed in this study.

Empirical evidence on the notion of positive illusions, and on emotionally avoidant coping, lend further support for the postulate that propensities to acknowledge inner distress can be counterproductive. It has been found, for example, that highly accurate self-perceptions exacerbate vulnerability to negative outcomes, whereas slight to moderate distortions in one's self-perceptions can be conducive to psychological functioning (Baumeister, 1989). Capacities to mildly distort reality in directions that enhance personal feelings of optimism and self-efficacy can bolster psychological functioning by promoting active efforts to cope or by reducing fear of failure (see Bjorklund, 1997; Paulhus & Reid, 1991; Taylor & Brown, 1988). Similarly, researchers have demonstrated that the ability to ignore emotional distress can be helpful in maintaining well-being (Jamner & Schwartz, 1986; Schwartz, 1990; Weinberger, 1990). Bonanno and colleagues have demonstrated that emotional avoidance can sometimes represent effective means of regulating feelings of grief, leading to relatively positive adjustment outcomes (Bonanno, Keltner, Holen, & Horowitz, 1995).

In view of evidence such as this, we sought to examine interactions between women's levels of ego development, their psychological distress, and their emotional experiences as mothers. Hypotheses were that mothers at high developmental levels may be at a general advantage over others in terms of their affective experiences as parents; however, in the presence of high psychiatric distress, this advantage would be largely lost.

Operationalization of Constructs

In selecting among maladjustment indices to which high ego development women might be particularly reactive, an obvious choice was overall subjectively perceived psychological

distress (i.e., self-reported *global symptomatology* across multiple domains). Beyond this, however, of particular interest were problems within domains that are considered to be particularly “unacceptable” among women (i.e., more so than among men). Two such indices were considered. The first was *anger expression*; given widespread socialization patterns, many women are uncomfortable with openly expressing anger (Chodorow, 1978; Gjerde, 1995; Maccoby, 1986; Zahn–Waxler, 1993). The second was mothers’ *abuse of drugs* during the lifetimes of their young children. Maternal substance abuse not only meets with a great deal of societal censure but also is associated with feelings of guilt among mothers themselves (Luthar, Cushing, & McMahon, 1997; Luthar & Suchman, 2000). Our expectation in this study, then, was that maternal affective experiences would be particularly compromised among high developmental level women who (a) subjectively perceived high global symptomatology, (b) reported high levels of expressed anger, or (c) acknowledged that they had abused substances during the lifetimes of their children. As compared to women at relatively low levels of ego development, these mothers would show greater deterioration in their maternal affective experiences in the presence versus absence of personal adjustment difficulties.

In terms of outcome variables, three relatively straightforward aspects of maternal affective experiences were considered. The first two were indices of women’s positive and negative affect in their roles as mothers: their feelings of overall satisfaction and distress in the parental role, respectively. The third was an indicator of the degree to which women felt supported, as opposed to isolated, in their roles as mothers.

The fourth construct we examined is a more novel one—that is, mothers’ capacities to acknowledge simultaneously strong, mutually conflicting emotions, both negative and positive, in their maternal roles. The coexistence of such polarized emotions has been documented in diverse qualitative clinical, developmental, and sociological studies (e.g., Chodorow, 1978; Hochschild, 1997), as well as in literary writings. “My children cause me the most exquisite suffering of which I have any experience. It is the suffering of ambivalence: the murderous alternation between bitter resentment and raw-edged nerves, and blissful gratification and tenderness” (Rich, 1976, p. 363). Based on their rich exploration of dynamics of family life, researchers Larson and Richards (1994, p. 52) note, “Our data show that for every happy moment taking care of children, mothers also experience an unhappy one.” Despite the apparent ubiquity of such polarized emotions in everyday mothering experiences, this area has received scant attention in prior quantitative research.¹

To capture the complexity of mothers’ feelings in relation to their parenting, we developed a measure based on hypothetical parenting vignettes, each of which elicits both positive and negative emotions. These vignettes were designed to capture qualitative differences in parenting predilections akin to Gilligan’s stages of women’s interpersonal relatedness. The highest stage in Gilligan’s (1982) developmental model involves the integration of others’ needs with those of the self, as contrasted with a more unilateral focus on one’s own desires at the lowest stage, or selfless abnegation, at the intervening level. In parallel fashion, the parenting vignettes (described in detail in the following section) were developed to capture capacities to simultaneously experience mutually conflicting emotions specifically in the context of relationships as mothers.

¹Many existing measures of parenting attitudes and behaviors involve separate assessments of discrete dimensions, which can then be mathematically combined to deduce particular parenting predilections (e.g., overall feelings of warmth and rejection, or of satisfaction and distress). Whereas such composites may capture the degree to which positive and negative parenting dimensions coexist over time across various situations, they do not capture the extent to which the mother can *simultaneously* retain consciousness of positive and negative emotions in everyday challenging child-rearing situations.

In summary, our objectives in this study were to examine how women's own psychological characteristics might relate to their emotional experiences as mothers. Of special interest were conditional effects involving ego development; we expected that in the presence versus absence of psychological difficulties, mothers at high developmental levels would show greater lability in maternal affective experiences than would those at low levels of development. Furthermore, we anticipated that women with high ego development would generally acknowledge both positive and negative emotions in responding to everyday parenting situations, but that again this complexity would be lost in the presence of high personal psychopathology.

Methods

Sample

We sought to oversample for demographic groups of mothers who are generally under-represented in developmental research (Graham, 1992; MacPhee, Kreutzer, & Fritz, 1994): women of low socioeconomic status (SES) and minority backgrounds. At the same time, in the interest of maximizing the sensitivity of our analyses (i.e., to avoid problems arising from restricted ranges), recruitment was aimed at ensuring high diversity in terms of both SES and personal adjustment. Accordingly, mothers were recruited from three sites in the Northeast area: a primary health care facility serving mostly lower SES women, treatment facilities for cocaine or opioid addiction, and administrative offices within a major university.

A total of 91 mothers, each of whom had at least one child between 5 and 16 years of age, were recruited for this study. The mean age of the mothers was 34.9 years ($SD = 6.37$). Eighteen percent of the women had only one child, 36% had two children, and 46% had three or more children. Sixty-seven percent of mothers were from minority group families, with 58% African Americans, 9% Hispanic mothers, and 33% Caucasians. Based on the Hollingshead Two-Factor Index of Social Position (Hollingshead & Redlich, 1958), 32% of women in the sample were of middle to high socioeconomic status and 68% were at low or low-middle socioeconomic levels; 20% received state assistance.

Measure of developmental level

The Washington University Sentence Completion Test Measuring Ego Development, Short Form 81 (SCT; Hy & Loevinger, 1996), was administered to assess women's developmental levels. High internal consistency, test-retest reliability, and both construct and discriminant validity have been documented for this instrument (Hauser, 1976; Loevinger, 1985; Novy & Francis, 1992; Redmore & Waldman, 1975).

In this study, responses to the 18 openended items were blindly scored by a trained rater according to the detailed scoring manual (Hy & Loevinger, 1996). A subset of protocols was independently scored by a second rater, and agreement between these two raters was high (intraclass correlation coefficient: .88); internal consistency was also found to be adequate ($\alpha = .78$). Two scores were computed for each participant: the Total Protocol Rating (TPR), which is based on ogive rules and assigns an overall ego development level, and the Item Sum score, a continuous score based on the sum of all items. The distribution of TPRs in this sample is shown in Table 1.

Each of the ego development stages in Table 1 differs from the others along both interpersonal and intrapsychic dimensions (Hy & Loevinger, 1996). Briefly, individuals at the earliest impulsive stage (E2) experience the world in black-and-white terms and express blatant, unsocialized impulses. At the self-protective stage (E3), the focus is on guarding against loss of impulse control by attempting to manipulate people and situations. At the

Conformist Stage (E4), responses reflect conventional, socially acceptable views, but modes of expression are conceptually simple. The self-aware stage (E5) marks the emergence of introspection and a self-conscious focus, with acknowledgment of the self as an active agent. Awareness of multiple possibilities and alternatives also gain prominence. The hallmark of the conscientious stage (E6) is true conceptual complexity; also characteristic are long-term aspirations, a richly differentiated inner life, and empathy. At the individualistic stage (E7), awareness of psychological causality emerges and interpersonal relationships are conceptualized with greater complexity, and the Autonomous Stage (E8) is marked by tolerance for ambiguity and appreciation for individuality. Finally, the Integrated Stage (E9; rarely attained) is characterized by appreciation for paradox, resolution of role conflicts and inner conflicts, and respect for the autonomy of others. None of the subjects in this study attained higher than an E6 level of ego development.

For all statistical analyses within this study we used the Item Sum score, as it is considered preferable to ogive-based TPR for the 18-item SCT (Hy, Bobbitt, & Loevinger, 1998) and is typically used in variable-based data analyses involving this instrument (Hauser et al., 1984; Luthar, 1991; Noam et al., 1984).

Measures of psychiatric problems

Global symptomatology—The Brief Symptom Inventory (BSI; Derogatis, 1993) is a widely used self-report measure of psychopathology. This measure yields a Global Severity Index, an indicator of current overall symptomatology across multiple domains experienced during the preceding 2 weeks. The BSI has been shown to be reliable and a valid measure of current global psychological distress (Boulet & Boss, 1991; Derogatis, 1993); the alpha coefficient for the Global Severity Index was .96 in this sample.

Anger expression—The State–Trait Anger Expression Scale (STAXI; Spielberger, 1996), is a 44-item questionnaire that assesses the experience and expression of anger. Three subscales of eight items each pertain to the degree to which anger is expressed. These include Anger/Out, the expression of anger aggressively toward others (e.g., “When angry or furious, I strike out at whatever infuriates me”); Anger/In, the extent to which anger is experienced but suppressed (e.g., “When angry or furious, I boil inside”); and Anger/Control, the monitoring of the expression of anger (e.g., “When angry or furious, I control my behavior”). Considered together, these three subscales yield an overall score on Anger Expression; it was this score that was used in this study. Cronbach’s alpha coefficient for the 24-item scale was .85.

Substance abuse—Maternal substance abuse during the lifetime of a biological child was determined in two stages. First, we administered the drug use history subscale items from the Addiction Severity Index (McLellan, Gargi, Bragg, Cacciola, Fureman, & Incmikoski, 1990). Each of the 10 items on this subscale pertains to a specific drug (e.g., alcohol, cocaine, heroin) and asks about the frequency, amount, and duration (onset and offset) of substance use during the past 30 days as well as over the respondent’s lifetime. For those women who reported any drug use since a child’s birth, we then determined whether they met the Structured Clinical Interview for DSM-III-R (Spitzer, Williams, Gibbon, & First, 1988) diagnostic criteria for drug abuse or dependence during this period. To minimize the chance of false positives, mothers were classified as substance abusers only if they met full DSM-III-R diagnostic criteria (i.e., they reported having used drugs to a degree that it significantly interfered with their abilities to carry out everyday activities).

A total of 22% of the women in the sample met diagnostic criteria for abuse or dependence of alcohol, marijuana, heroin, or cocaine during the lifetime of at least one child. Fifty

percent reported that they had abused substances at some point during their own lives, and 11% were current substance abusers at the time of the study.

Maternal affective experiences

Positive maternal feelings—The Parent–Child Relationship Inventory (PCRI; Gerard, 1994) is a 78-item questionnaire that measures attitudes toward parenting and children. Two of the seven PCRI subscales were directly relevant to the objectives of this study, pertaining to positive *emotional experiences* in the maternal role: Satisfaction with Parenting (the extent to which the mother derives enjoyment from being a parent) and perceived Parental Support (the degree to which parents feel supported as opposed to isolated in the parenting role).

Of the remaining subscales on the PCRI, four assess specific facets of maternal *behaviors* toward children: Communication, Involvement, Limit Setting, and Autonomy (fostering independence). The seventh subscale, Role Orientation, assesses the degree to which parenting roles are shared equally versus distinctly delineated for mothers and fathers.

Adequate psychometric properties have been established for the PCRI (Gerard, 1994). Within this sample, Cronbach's alpha coefficients for the different subscales were as follows: Satisfaction, .83; Support, .80; Involvement, .81; Communication, .74; Limit Setting, .85; and Autonomy, .67.

Negative maternal feelings—Feelings of distress in the maternal role were measured via the Parental Distress subscale (12 items) of the 36-item Parenting Stress Index (PSI, short form; Abidin, 1995). This subscale encompasses feelings of stress experienced by the mother that are directly related to parenting, including feelings of inadequacy as a parent and both conflicts and lack of support in the parental role. Other subscales of the PSI are Parent–Child Dysfunctional Interactions: (a parent's perceptions that interactions with her child are not reinforcing to her), and Difficult Child (which focuses essentially on the child's temperament). Acceptable validity and reliability are documented for this instrument (Abidin, 1995). In this sample, Cronbach's alpha coefficients were .82 for the Distress scale, and .81 and .84, respectively, for the other two subscales.

Complexity of maternal feelings—“Vignettes on Family Relations,” an instrument specifically designed for this study, is intended to assess mothers' range of emotional complexity in everyday parenting situations. Rather than tapping into single, discrete, affective responses from a mother, this measure *simultaneously* pulls for multiple, mutually opposed maternal responses in the context of an open-response format.²

More specifically, the vignettes are a series of seven incidents,³ each of which pulls for three discrete categories of feelings: *positive feelings directed at the child*, such as protectiveness, empathy, and appreciativeness; *negative feelings directed at the child*, such as anger, irritation, or disappointment; and feelings of *self-reproach or guilt*, at the mother's own potential contribution to the problem. An example:

²Our decision to use hypothetical stimulus materials was guided partly by the use of this methodology in the moral development literature (e.g., Miller & Bersoff, 1992, 1994). Open-ended responses to vignettes have been used to understand judgments about morality among individuals with widely varying sociodemographic and cultural characteristics. In much the same way, we sought to use hypothetical situations that could be used with parents of varying backgrounds and with children of various ages (rather than being directed to parents of children of a particular chronological age group).

³We originally started out with 10 incidents but found in preliminary pilot testing that 3 situations elicited negligible variability in participants' responses (e.g., almost every mother said she would experience only positive emotions or negative ones). These incidents were therefore subsequently omitted.

Your 5-year-old son enjoys watching shows on television which involve “good guys and bad guys.” He watches at least two shows of this kind every day, even though you try to discourage him. Last night, he stayed up late watching one such show, and then woke you up, crying, at three in the morning. He said he was afraid that the bad guys on TV were coming to get him. You were exhausted, after having had a long and tiring day the day before, but your son kept crying hysterically and refused to go back to bed.

After each vignette was read aloud to the mother, she was asked how she might feel were she in such a situation. Mothers were allowed to describe as many responses as they wished. Their responses were audiotaped and subsequently transcribed; scoring was conducted using the transcribed responses.

Each response was scored according to two criteria: *complexity* and *developmental sophistication*. Complexity indicated the degree to which a response contained each of the three mutually distinct categories of feelings: positive, negative, and self-reproachful. A narrative that included all three discrete categories of emotions, for example, received a score of 3, and one that included a single feeling dimension received a score of 1. Responses were also scored for *developmental sophistication* of individual feelings within each of these categories, guided by existing developmental evidence on individuals’ capacities for empathy, reciprocity in relationships, and guilt (see Gilligan, 1982; Kochanska, 1997; Maccoby, 1990, 1992; Westenberg & Block, 1993; Zahn–Waxler, Kochanska, Krupnick, & McKnew, 1990). To illustrate, high scores (of 3) were accorded to *positive responses* that specifically indicated a capacity to take the child’s perspective (e.g., “It would hurt me terribly to know what he went through” as opposed to “I would feel sorry for him”); to *negative responses* that acknowledged mutuality in the parent–child relationship (“I would feel frustrated that we couldn’t agree” as opposed to “I’d feel so mad that he behaved like that”); and to *self-reproach* responses that indicated a willingness to acknowledge responsibility (“I’d wonder what I could have done differently”) as opposed to undifferentiated or extreme responses of self-blame (“I’d feel like a total failure”).

Using these dual criteria and adding scores thus derived, narratives in response to each vignette could receive a maximum score of 12 (i.e., 3 points for overall emotional complexity and up to 3 points each for the complexity of positive, negative, and self-reproachful feelings), with the maximum possible total score across all seven vignettes thus being 84. Paralleling advanced levels within both Loevinger’s and Gilligan’s developmental models, then, the highest scores on the vignettes represent the capacities to experience diverse conflicting emotions, with acknowledgment of the needs of the child as well as the self. As in other studies using vignettes of hypothetical situations (e.g., Rogosch, Mowbray, & Bogat, 1992; Zahn–Waxler et al., 1990), the assumption was that mothers’ own underlying emotions and concerns would be reflected in the responses they gave.

The scoring system for the parenting vignettes had been developed with early pilot subjects prior to the start of this study. To assess interrater reliability of study protocols, intraclass correlation coefficients were calculated using the two-way formula (Shrout & Fleiss, 1979), with rater considered to be a fixed rather than a random effect. These calculations were based on independent ratings of each of 40 randomly selected interviews by two trained, blind raters. Interrater agreement based on these 40 protocols was found to be adequate (interclass correlation coefficient = .69).

Cronbach’s internal consistency coefficient for this instrument was adequate (.66). Furthermore, correlations of derived scores—henceforth referred to as Parental Affective Complexity (PAC) scores—all indicated adequate validity of measurement. As shown in Table 2, for example, this score was positively related to ego development and negatively

related to Global Symptoms, Anger Expression, and Parental Distress (problems that would each constrain the diversity of maternal emotional responses to the vignettes).

Procedure

To recruit mothers for this research, flyers describing the study were posted at various sites mentioned earlier: primary health care facilities, substance abuse treatment facilities, and libraries and administrative offices in a university setting. Women who contacted the researchers were asked to complete a brief screening to ensure that they were raising at least one biological child who was between 5 and 16 years of age at the time. Participants were assessed in individual interviews lasting approximately 2 hr each, during which they first responded to the Vignettes of Family Relations, followed by the battery of self-report instruments. Questions about demographic information and drug history were asked at the very end in order to avoid any biasing of interviewers on prior questions. All interviews were conducted by female research assistants, and mothers were each paid \$20 for their participation.

Results

Means and standard deviations of all variables in the study, as well as intercorrelations among them, are presented in Table 2. As expected, women's ego development scores were correlated with all four indices of maternal affective experiences ($.23 < |r| < .43$). Furthermore, with a single exception (maternal drug abuse and PAC) the symptom indices also showed strong associations with maternal affective variables.

Links between ego development, symptom indices, and outcome variables were examined via hierarchical multiple regression analyses (Cohen & Cohen, 1983), with separate analyses predicting Satisfaction, Support, Distress, and Affective Complexity. In each case, the sociodemographic variables of maternal ethnicity and SES were entered at the outset (Blocks 1 and 2). Among the psychological variables, Ego Development was entered first given its conceptual salience within this study (Block 3). This was followed by Global Symptoms, Anger, and Maternal Substance Abuse, with these three variables entered in order of decreasing tolerance (Tabachnik & Fidell, 1989). Finally, interaction terms between Ego Development and each of the three maladjustment indices were entered, with order of entry, again, determined by decreasing tolerance.

Results indicated that although ego development had significant univariate associations with all four parent affective experiences, after ethnicity and SES had been considered, main effect links were substantially weakened (Table 3). Conversely, even after considering ethnicity and SES, women's psychopathology indices retained significant main effect associations with their maternal affective experience indices, with collective variance explained ranging from 6% (for Affective Complexity) to a high of 33% (Support). Thus, women's personal psychopathology appeared to have more robust overlap with the quality of their emotional experiences as parents than did overall levels of ego development.

With regard to interaction effects—of central interest in this study—four terms were statistically significant ($p < .05$) and one achieved borderline significance ($p < .07$). These effects are displayed in Figures 1a–1e, with scores on criterion variables presented in standardized form when possible (T scores vs. percentiles based on national norms), in order to ease interpretation of the findings. As shown in these figures, high developmental level women fell within low-risk zones on diverse parenting indices when there was no drug abuse during a child's lifetime (Figures 1a and 1d), and when global symptomatology was low (Figures 1b and 1c). In the presence of these personal psychopathology indices, on the other hand, these mothers reflected clinically significant problems (see Abidin, 1995;

Gerard, 1994), with *T* scores approximating 40 for parenting satisfaction and support, and distress scores at the 90th percentile. With parental affective complexity as the outcome variable, similarly, the apparent advantages of high ego development level were sharply reduced in the presence versus absence of high global symptoms.

Additional Analyses

To ascertain whether such interaction effects would be obtained regardless of the age group of the mothers' children, the four equations were rerun with controls, inserting two additional variables immediately following SES: the presence of a preschooler or infant and the presence of a school-age child or adolescent. Findings remained unchanged. Similarly, results were unaltered when maternal age was entered along with the other sociodemographic indicators of SES and minority ethnicity.

To determine whether interaction effects involving ego development might actually represent the effects of varying socioeconomic status (see Table 1), all regressions were rerun with SES replacing ego development in all 12 interaction terms. None of these terms achieved statistical significance, indicating that the significant interaction terms in Table 3 did not simply represent artifacts of varying SES levels.

As a further test of consistency of interaction effects found, we reexamined equations in Table 3 in relation to variables representing aspects of mothers' *behaviors* with their children (as opposed parental affective experiences, the central foci of this study). These dependent variables included Autonomy, Communication, Involvement, Limit Setting, and Dysfunctional Interactions as measured by the PCRI and PSI respectively. Results revealed three significant interaction effects, each of which involved Ego Development in interaction with Drug Abuse. The nature of these interactions was entirely consistent with those in Figure 1. Again, among high developmental level women, those who abused drugs fared more poorly than nonusers on Involvement, Autonomy, and increases in Dysfunctional Parent–Child Interactions. Among mothers at low ego development, the presence or absence of drug abuse appeared to make relatively little difference.

Discussion

Results of this study counter widespread views that high developmental levels confer stability in positive adaptation, regardless of the presence of life stressors (see Luthar & Zigler, 1991; Masten, Best, & Garmezy, 1990). In the absence of subjectively perceived personal maladjustment, women at high ego development did reflect relatively positive affective experiences in their maternal roles. In the presence of personal psychopathology, however, these advantages were sharply attenuated, such that developmentally advanced individuals reported difficulties commensurate with those of low developmental level mothers. In sum, developmental sophistication was linked with greater, rather than less, variability in maternal functioning, considering the presence versus absence of personal maladjustment.

Our findings concerning high ego development are consistent with extant evidence on the implications of ruminative tendencies for depression among women. Defining features of advanced ego development are tendencies toward introspection and awareness of inner life (Loevinger & Wessler, 1983). As Nolen–Hoeksema (1987, 1990) has demonstrated, tendencies to reflect upon their feelings of unhappiness can be detrimental to women's overall adjustment across multiple adjustment spheres. Similarly, Pyszczynski and colleagues have shown that whereas high self-awareness may often be adaptive (e.g., in bolstering self-regulation), when occurring with self-schemas that are largely negative in

nature, they can substantially exacerbate symptoms of maladjustment (Pyszczynski & Greenberg, 1987; Pyszczynski, Greenberg, Hamilton, & Nix, 1991).

Our findings also resonate with Zigler's theoretical contentions regarding links between high developmental levels and propensities to guilt. More so than others, people at high levels of development tend to internalize societal demands and values and set relatively rigorous standards for their personal adaptation. When they perceive themselves as not measuring up to these demanding standards, feelings of self-reproach ensue (see Zigler & Glick, 1986, for a review of relevant research; also Pyszczynski & Greenberg, 1987). Arguments such as these are especially relevant to the findings we obtained for substance abuse, a disorder that is highly stigmatized among women in general and particularly so among mothers (Luthar, Cushing, & McMahon, 1997; Luthar & Suchman, 2000). Applying Zigler's formulations, it is conceivable that among women who acknowledged substance abuse during their children's lifetimes, those at a relatively high level of ego development (postconformists) were particularly prone to self-recrimination and thus were more vulnerable than others to experiencing negative affect in their roles as mothers.

In considering the interactive trends we found here, it is critical to clarify that overall, high developmental status does *not* connote heightened overall risk. Consistently, our results showed that it was women at low developmental levels who reflected poorer functioning across parenting indices—irrespective of high or low levels of personal psychopathology. Interaction effects obtained here can be construed as indicating simply that high developmental levels do not inevitably confer “immunity against adversity” (e.g., because of superior coping skills) but can be linked with marked deterioration in functioning when coexisting with subjective experiences of psychopathology.

Reconciling differences with other evidence

Considering our results in relation to prior relevant research, there are also some instances of apparent contradictions. Noteworthy in this regard are Linville's (1985, 1987) contentions on the advantages of self-complexity. In addition to introspectiveness, a hallmark of high ego development is high personal complexity, and Linville has suggested that high self-complexity is linked with *greater* rather than less resilience in the face of negative life experiences. Specifically, she has demonstrated that individuals who define themselves in multiple roles maintain positive feelings about some aspects of the self, even when experiencing negative affect in relation to others. By contrast, for those with less complex self-definitions, negative feelings experienced in a particular role tend to develop into generalized negative affect (Linville, 1985, 1987). How might these findings be reconciled with the present results?

Divergences in findings may reflect critical differences both in the dimensions to which individuals' reactivity was gauged and in connotations of the term “complexity.” Linville's focus was on responses to external life events, whereas ours was on reactivity to personally acknowledged adjustment difficulties. It is entirely plausible that a woman who defines herself in terms of multiple significant roles (i.e., as a mother, a professional, a spouse, and a friend) does in fact have the advantage of reflecting on successes in one role when experiencing trouble in others. Assume, however, that despite these general coping advantages distress has already set in and been explicitly acknowledged. At this juncture, a woman who is developmentally complex—and introspective—is likely to be particularly vulnerable, with her predilections toward rumination beginning to work against her.

Rephrased in terms of analogous evidence from the literature on stress, coping, and emotional regulation (see Gunnar, 1994), what we are proposing is that if an external stressor calls for vigilance and active, effortful coping responses, the more multifaceted,

complex individual may generally be at an advantage. On the other hand, if such coping responses have been activated but have failed—such that feelings of distress have set in—then this same person’s advantages are lost. Negative affect can lead to deterioration in people’s abilities not only to cope effectively (see Aspinwall & Taylor, 1997; Cicchetti & Lynch, 1995) but also to reason about their emotions, such that heightened focus on one’s despondency may often lead to situations where “sadness fosters further sadness” (Collins & Gunnar, 1990, p. 393).

Our findings also appear to be discrepant with some previous evidence on cognitive maturity as a protective–stabilizing factor in resilience. Contrary to previously described trends reported by Luthar and Ripple (1994), other researchers have found that, more so than their less intelligent counterparts, bright children appear to be relatively *unaffected* by increasing levels of life stress (Garmezy, Masten, & Tellegen, 1984; Kandel, Mednick, Kirkegaard–Sorensen, Hutchings, Knop, Rosenberg, & Schulsinger, 1988; Masten, Garmezy, Tellegen, Pellegrini, Larkin, & Larsen, 1988). The implication, thus, is that cognitive maturity can buffer children against adversity.

Collectively considering such apparently contradictory findings, Freitas and Downey (1998) have argued that intelligence (or any other personal attribute) cannot be deemed to serve protective functions without knowledge of contextual factors and of other “psychological mediating units,” such as the individual’s personal characteristics. To illustrate their arguments, they cite recent findings that bright youngsters, far more than their less intelligent peers, tend to be adversely affected by difficulties in self-regulation. Whereas bright children with poor self-regulation capacities were found to be far more aggressive than their counterparts with good self-regulation, aggressive behaviors among less intelligent children showed little variability depending on levels of self-regulation (Rodriguez, Shoda, Mischel, & Wright, 1998). Yet again, then, the implication is that the ramifications of attributes which generally are protective against external stressors—high IQ or high developmental level—can become sharply attenuated in the presence of particular “catalyzing” personal vulnerabilities.

Finally, in contrast to our findings on both subjective distress and maternal drug use, results did not support predictions that women with advanced ego development would be particularly reactive to high expressed anger. Mothers’ reports of expressed anger had powerful main effect links with both ego development as well as all outcome variables, but interaction effects were not significant. Failure to detect significant interactions here may have been partly due to the prior inclusion, within our hierarchical regression analyses, of other terms involving constructs having high shared variance with expressed anger (global symptoms).

Caveats, limitations, and future directions

Aside from our measures of ego development and parental affective complexity, instruments used in this study were based in self-report by mothers. Rather than constituting a methodological limitation, however, this aspect of our design reflects a deliberate choice. Of central interest to us was women’s emotional experiences as mothers, and these were assessed via a variety of instruments ranging from highly structured ones to more subtle interviews and projective techniques.

Whereas effect sizes for significant interaction effects in this study were modest (R^2 changes between .02 and .05), this does not necessarily imply their attenuated credibility. Though often of great theoretical interest, interactions usually account for less than 2% of variance in psychological outcomes effects (Aiken & West, 1991; Luthar, 1993). Furthermore, offsetting the small effect sizes of the current set of findings is their unequivocal consistency

in directionality—with each other, as well as with prior research involving both parallel conceptual propositions (e.g., Nolen-Hoeksema, 1987, 1990; Pyszczynski & Greenberg, 1987; Pyszczynski et al., 1991) and similar data-analytic strategies (e.g., Luthar & Ripple, 1994). Interaction effects are typically difficult to replicate, and it is note-worthy that of the series of effects found here not one suggested that high developmental level served protective–stabilizing functions (Luthar, Cicchetti, & Becker, 2000) in the presence of subjectively perceived distress.

Given high empirical and conceptual overlap among some self-reported outcomes (e.g., distress and satisfaction), it may be argued that the multiple interaction effects we found may essentially represent a single phenomenon. In this regard, we note that the direction of interaction effects found remained entirely consistent even across constructs with little shared empirical *and* method variance (e.g., self-reports of distress and responses to hypothetical vignettes).

The cross-sectional nature of our data precludes any conclusive inferences about causality. To illustrate, rather than inferring that high development level mothers are more self-chastising when they indulge in drug abuse, it is possible that high development level women who feel negatively in their roles as parents develop high levels of global psychiatric distress or problems of drug abuse. In either instance, however, the substantive implication remains the same—that is, when women perceive problems in some realms of their lives, those at high developmental levels reflect greater levels of sensitivity, effects which then seem to spill over to other areas.

By the same token, there is equivocality about the directionality of main effect links in this study, such that women who had negative experiences in their maternal roles may have developed high levels of personal psychopathology rather than the converse. This inference, eminently plausible, deserves more attention in future research. Interpersonal relationships in general are highly salient for women (Cross & Madson, 1997; Gilligan, 1982; Miller, 1976; Strough, Berg, & Sansone, 1996; Warren & McEachren, 1983); for women who are mothers, connectedness with their children is likely to be critical to their overall self-definitions or self-concepts. Feelings of efficacy and satisfaction as parents may affect not only mothers' own psychological adjustment but also their interactions with their children, and ultimately their children's adjustment patterns as well (see Brody, Stoneman, Flor, McCrary, Hastings, & Conyers, 1994; Cowen, Work, & Wyman, 1997; Larson & Richards, 1994). In future research, therefore, there is a need for concerted attention to gaps in our empirical exploration of women's experiences in their roles as parents. Moving beyond appraising what mothers signify for their children, we need to consider as well what the experiences of raising children might signify for mothers immersed in this major life task.

There is also a need for further inquiry into the varied mental health implications of high developmental levels. Prior research findings have generally corroborated Loevinger's assertions (Loevinger & Wessler, 1983; Hy & Loevinger, 1996) that inner distress occurs at all developmental levels, such that ego development scores are only weakly correlated with subjective feelings of depression and anxiety (see Helson, Mitchell, & Hart, 1985; McCrae & Costa, 1980; Westenberg & Block, 1993). There is a need for more attention to the possibility that vulnerabilities linked with high developmental levels lie not so much in the likelihood that inner distress will develop but in the probability that such distress will rapidly spread, or tenaciously sustain, once it has been subjectively acknowledged.

Additionally, the magnitude of links involving SES in this study point to the need for more developmental studies involving families from varying socioeconomic backgrounds. Simple correlations between SES and maternal psychological variables ranged between .30 and .60,

and even after considering mothers' ethnic backgrounds SES explained between 11 and 17% of variability of mother's feelings in the parental role. Similarly, the significant links between ego development and maternal affective experiences became almost negligible once variability in mothers' sociodemographic backgrounds had been considered. Without question, there is much to be learned from within-group investigations of disadvantaged mothers and children, involving in-depth scrutiny of salient risk and protective process (e.g., Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Egeland, Carlson, & Sroufe, 1993; McLoyd, Jayaratne, Ceballo & Borquez, 1994; Rogosch et al., 1992; Shaw, Owens, Vondra, Keenan, & Winslow, 1996). However, if developmentalists seek to effectively debate arguments that poverty has only modest effects on parents' and children's psychological functioning (see Rowe & Rodgers, 1998), there must be more studies involving not only (a) those risk or protective forces that are potent in the lives of disadvantaged families (see Garcia-Coll, Lamberty, Jenkins, McAdoo, Crnic, Wasik, & Vasquez-Garcia, 1996; Luthar, 1999) but *also* (b) a wide enough spectrum of socioeconomic backgrounds to circumvent problems of restricted range in statistical analyses.

Finally, the findings of this study carry various implications for interventions. Most obviously, they underscore the need for intervening with women at low developmental levels, who consistently reported problems across parenting indices, regardless of the presence or absence of personal distress. In addition, these results beg widespread assumptions among clinicians (see Bonnano et al., 1995) that enhancing individuals' introspectiveness and self-awareness will invariably be conducive to their overall mental health. For highly ruminative people experiencing substantial subjective distress, long-term adaptation might be partly fostered by therapeutic attempts to *reduce* self-focusing tendencies (Pyszczynski & Greenberg, 1987)—for example, via benign distracting activities (Nolen-Hoeksema, 1990) or through redirection of intrapersonal preoccupations toward interactions with the outside world (Bonnano & Castonguay, 1994).

In conclusion, results of this study suggest that, in general, mothers at high developmental levels are at an advantage over others in terms of the tenor of their affective experiences in the maternal role. On the other hand, when these mothers experience high personal distress, their advantages can be lost, potentially resulting in strikingly low feelings of satisfaction as parents, high feelings of isolation, as well as constriction in emotional responsiveness within everyday parenting situations. These findings add to a growing body of evidence that counters pervasive (though empirically little justified) views among developmentalists (see Hy & Loevinger, 1996) and among clinicians (Bonanno et al., 1995)—namely, that high complexity and self-awareness is inevitably salutary for over-all adaptation. Clearly, there must be greater attention to interactive associations between developmental complexity and other facets of adjustment (Luthar & Ripple, 1994; White, Moffitt, & Silva, 1989), with consideration of unique areas of heightened reactivity among individuals typically thought of as being advantaged and relatively well insulated against life's adversities.

Acknowledgments

Preparation of this manuscript was supported by Research Scientist Development Award K21-DA00202, by P50-DA09241, RO1-DA10726, and RO1-DA11498, and grants from the W.T. Grant Foundation. We gratefully acknowledge assistance from Lara Shugar in the developing the Vignettes of Family Relations. Thanks are also due to Laurel Bidwell, Thomas McMahon, and other members of the Child and Family Research Group, Yale Substance Abuse Center.

References

Abidin, R. Parenting stress index. Odessa, FL: Psychological Assessment Resources; 1995.

- Aiken, LS.; West, SG. Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage; 1991.
- Aspinwall LG, Taylor SR. A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*. 1997; 121:417–436. [PubMed: 9136643]
- Barnard, KE.; Martell, LK. Mothering. In: Bornstein, MH., editor. *Handbook of parenting: Status and social conditions of parenting*. Vol. 3. Mahwah, NJ: Erlbaum; 1995. p. 3-26.
- Baumeister RF. The optimal margin of illusion. *Journal of Social and Clinical Psychology*. 1989; 8:176–189.
- Belsky J. The determinants of parenting: A process model. *Child Development*. 1984; 55:83–96. [PubMed: 6705636]
- Bjorklund DF. The role of immaturity in human development. *Psychological Bulletin*. 1997; 122:153–169. [PubMed: 9283298]
- Bonanno GA, Castonguay LG. On balancing approaches to psychotherapy: Prescriptive patterns of attention, motivation, and personality. *Psychotherapy*. 1994; 31:571–587.
- Bonanno GA, Keltner D, Holen A, Horowitz KJ. When avoiding unpleasant emotions might not be such a bad thing: Verbal-autonomic response dissociation and midlife conjugal bereavement. *Journal of Personality and Social Psychology*. 1995; 69:975–989. [PubMed: 7473042]
- Bornstein, MH. *Handbook of parenting*. Mahwah, NJ: Erlbaum; 1995.
- Boulet J, Boss MW. Reliability and validity of the Brief Symptom Index. *Psychological Assessment*. 1991; 3:433–437.
- Brody GH, Stoneman Z, Flor D, McCrary C, Hastings L, Conyers O. Financial resources, parent psychological functioning, parent co-care-giving, and early adolescent competence in rural two-parent African-American families. *Child Development*. 1994; 65:590–605. [PubMed: 8013241]
- Carlozzi AF, Gaa JP, Liberman DB. Empathy and ego development. *Journal of Counseling Psychology*. 1983; 30:113–116.
- Chase–Lansdale PL, Brooks–Gunn J, Zamsky ES. Young African-American multigenerational families in poverty: Quality of mothering and grandmothering. *Child Development*. 1994; 65:373–393. [PubMed: 8013228]
- Chodorow, N. *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley, CA: University of California Press; 1978.
- Cicchetti, D.; Lynch, M. Failures in the expectable environment and their impact on individual development: The case of child maltreatment. In: Cicchetti, D.; Cohen, DJ., editors. *Developmental psychopathology: Risk, disorder, and adaptation*. Vol. 2. New York: Wiley; 1995. p. 32-71.
- Cohen, J.; Cohen, P. *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum; 1983.
- Collins WA, Gunnar MR. Social and personality development. *Annual Review of Psychology*. 1990; 41:387–416.
- Cowen, EL.; Work, WC.; Wyman, PA. The Rochester Child Resilience Project (RCRP): Facts found, lessons learned, future directions divined. In: Luthar, SS.; Burack, JA.; Cicchetti, D.; Weisz, JR., editors. *Developmental psychopathology: Perspectives on adjustment, risk, and disorder*. New York: Cambridge University Press; 1997. p. 527-547.
- Cross SE, Madson L. Models of the self: Self-construals and gender. *Psychological Bulletin*. 1997; 122:5–37. [PubMed: 9204777]
- Darling N, Steinberg L. Parenting style as context: An integrative model. *Psychological Bulletin*. 1993; 113:487–496.
- Derogatis, LR. *Brief Symptom Inventory: Administration, scoring and procedures manual*. Minneapolis, MN: National Computer Systems; 1993.
- Egeland B, Carlson E, Sroufe LA. Resilience as process. *Development and Psychopathology*. 1993; 5:517–528.
- Freitas AL, Downey G. Resilience: A dynamic perspective. *International Journal of Behavioral Development*. 1998; 22:263–285.

- Garcia-Coll C, Lamberty G, Jenkins R, McAdoo HP, Crnic K, Wasik BH, Vasquez-Garcia H. An integrative model for the study of developmental competencies in minority children. *Child Development*. 1996; 67:1891–1914. [PubMed: 9022222]
- Garnezy N, Masten AS, Tellegen A. The study of stress and competence in children: A building block for developmental psychopathology. *Child Development*. 1984; 55:97–111. [PubMed: 6705637]
- Gerard, AB. *Parent-Child Relationship Inventory: Manual*. Los Angeles: Western Psychological Services; 1994.
- Gilligan, C. *In a different voice*. Cambridge, MA: Harvard University Press; 1982.
- Gjerde PF. Alternative pathways to chronic depressive symptoms in young adults: Differences in developmental trajectories. *Child Development*. 1995; 66:1277–1300. [PubMed: 755216]
- Graham S. Most of the subjects were white and middle class. *American Psychologist*. 1992; 47:629–639.
- Gunnar, M. Psychoendocrine study of temperament and stress in early childhood: Expanding current models. In: Bates, J.; Wachs, T., editors. *Temperament: Individual differences at the interface of biology and behavior*. New York: APA Press; 1994. p. 175-198.
- Hauser ST. Loevinger's model and measure of ego development: A critical review. *Psychological Bulletin*. 1976; 83:928–955.
- Hauser ST, Powers SI, Noam GG, Jacobson AM, Weiss B, Follansbee DJ. Familial contexts of adolescent ego development. *Child Development*. 1984; 55:195–213. [PubMed: 6705622]
- Helson R, Mitchell V, Hart B. Lives of women who became autonomous. *Journal of Personality*. 1985; 53:257–285. [PubMed: 4045679]
- Hochschild, AR. *The time bind: When work becomes home and home becomes work*. New York: Henry Holt; 1997.
- Hollingshead, AB.; Redlich, FC. *Social class and mental illness*. New York: Wiley; 1958.
- Hy, LX.; Bobbitt, K.; Loevinger, J. Testing and revising the rules for obtaining TPRs for the 36-item and the 18-item forms. In: Loevinger, J., editor. *Technical foundations for measuring ego development: The Washington University Sentence Completion Test*. Mahwah, NJ: Erlbaum; 1998. p. 25-27.
- Hy, LX.; Loevinger, J. *Measuring ego development*. Mahwah, NJ: Erlbaum; 1996.
- Jamner LD, Schwartz GE. Self-deception predicts self-report and endurance of pain. *Psychosomatic Medicine*. 1986; 48:211–233. [PubMed: 3704084]
- Kandel E, Mednick SA, Kirkegaard-Sorensen L, Hutchings B, Knop J, Rosenberg R, Schulsinger F. IQ as a protective factor for subjects at high risk for antisocial behavior. *Journal of Consulting and Clinical Psychology*. 1988; 56:224–226. [PubMed: 3372829]
- Kochanska G. Mutually responsive orientation between mothers and their young children: Implications for early socialization. *Child Development*. 1997; 68:94–112. [PubMed: 9084128]
- Larson, R.; Richards, MH. *Divergent realities: The emotional lives of mothers, fathers, and adolescents*. New York: Basic Books; 1994.
- Levitt MJ, Weber RA, Clark MC. Social network relationships as sources of maternal support and well-being. *Developmental Psychology*. 1986; 22:310–316.
- Linville PW. Self-complexity and affective extremity: Don't put all of your eggs in one cognitive basket. *Social cognition*. 1985; 3:94–120.
- Linville PW. Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of Personality and Social Psychology*. 1987; 52:663–676. [PubMed: 3572732]
- Loevinger, J. *Ego development: Conceptions and theories*. San Francisco: Jossey-Bass; 1976.
- Loevinger J. Revision of the Sentence Completion Test for Ego Development. *Journal of Personality and Social Psychology*. 1985; 48:420–427. [PubMed: 3981402]
- Loevinger, J.; Wessler, R. *Measuring ego development*. San Francisco: Jossey-Bass; 1983.
- Luthar SS. Vulnerability and resilience: A study of high-risk adolescents. *Child Development*. 1991; 62:600–616. [PubMed: 1914628]
- Luthar SS. Annotation: Methodological and conceptual issues in research on childhood resilience. *Journal of Child Psychology and Psychiatry*. 1993; 34:441–453. [PubMed: 8509489]

- Luthar, SS. *Children in poverty: Risk and protective forces in adjustment*. Thousand Oaks, CA: Sage; 1999.
- Luthar SS, Cicchetti D, Becker B. The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*. 2000; 71:543–562. [PubMed: 10953923]
- Luthar, SS.; Cushing, G.; McMahon, T. Substance abusers and their families: Developmental perspectives. In: Luthar, SS.; Burack, J.; Cicchetti, D.; Weisz, J., editors. *Developmental psychopathology: Perspectives on adjustment, risk, and disorder*. New York: Cambridge University Press; 1997. p. 437-458.
- Luthar SS, Ripple CH. Sensitivity to emotional distress among intelligent adolescents: A short-term prospective study. *Development and Psychopathology*. 1994; 6:343–357.
- Luthar SS, Suchman NE. Relational Psychotherapy Mothers' Group: A developmentally informed intervention for at-risk mothers. *Development and Psychopathology*. 2000; 12:235–253. [PubMed: 10847626]
- Luthar SS, Zigler E. Vulnerability and competence: A review of research on resilience and childhood. *American Journal of Orthopsychiatry*. 1991; 61:6–22. [PubMed: 2006679]
- Maccoby, EE. Social groupings in childhood: Their relationship to prosocial and antisocial behavior in boys and girls. In: Olweus, D.; Block, J.; Radke-Yarrow, M., editors. *Development of prosocial and antisocial behavior*. London: Academic Press; 1986. p. 263-284.
- Maccoby EE. Gender and relationships. *American Psychologist*. 1990; 45:513–520. [PubMed: 2186679]
- Maccoby EE. The role of parents in the socialization of children: An historical overview. *Developmental Psychology*. 1992; 28:1006–1017.
- MacPhee D, Kreutzer JC, Fritz JJ. Infusing a diversity perspective into human development courses. *Child Development*. 1994; 65:699–715. [PubMed: 8013249]
- Masten A, Best K, Garmezy N. Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*. 1990; 2:425–444.
- Masten AS, Garmezy N, Tellegen A, Pellegrini DS, Larkin K, Larsen A. Competence and stress in school children: The moderating effects of individual and family qualities. *Journal of Child Psychology and Psychiatry*. 1988; 29:745–764. [PubMed: 3235488]
- McLellan, AT.; Gargi, P.; Bragg, A.; Cacciola, J.; Fureman, B.; Incmikoski, R. *Addiction Severity Index: Administration manual*. Philadelphia: University of Pennsylvania–Veterans Administration Center for Studies of Addiction; 1990.
- McCrae RR, Costa PT. Openness to experience and ego level in Loevinger's Sentence Completion Test: Dispositional contributions to developmental models of personality. *Journal of Personality and Social Psychology*. 1980; 39:1179–1190.
- McLoyd VC, Jayaratne TE, Ceballos R, Borquez J. Unemployment and work interruption among African-American single mothers: Effects on parenting and adolescent socioemotional functioning. *Child Development*. 1994; 65:562–589. [PubMed: 8013240]
- Miller, J. *Toward a new psychology of women*. Boston: Beacon Press; 1976.
- Miller JG, Bersoff DM. Culture and moral judgment: How are conflicts between justice and interpersonal responsibilities resolved? *Journal of Personality and Social Psychology*. 1992; 62:541–554. [PubMed: 1583583]
- Miller JG, Bersoff DM. Cultural influences on the moral status of reciprocity and the discounting of endogenous motivation. *Personality & Social Psychology Bulletin*. 1994; 20:592–602.
- Noam GG, Hauser ST, Santostefano S, Garrison W, Jacobson AM, Powers SI, Mead M. Ego development and psychopathology: A study of hospitalized adolescents. *Child Development*. 1984; 55:184–194. [PubMed: 6705621]
- Nolen-Hoeksema S. Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin*. 1987; 101:259–282. [PubMed: 3562707]
- Nolen-Hoeksema, S. *Sex differences in depression*. Stanford, CA: Stanford University Press; 1990.
- Novy DM, Frances DJ. Psychometric properties of the Washington University Sentence Completion test. *Educational and Psychological Measurement*. 1992; 52:1029–1039.

- Paulhus DL, Reid DB. Enhancement and denial in socially desirable responding. *Journal of Personality and Social Psychology*. 1991; 60:307–317.
- Pyszczynski T, Greenberg J. Self-regulatory perseveration and the depressive self-focusing style: A self-awareness theory of reactive depression. *Psychological Bulletin*. 1987; 102:122–138. [PubMed: 3615702]
- Pyszczynski T, Greenberg J, Hamilton J, Nix G. On the relationship between self-focused attention and psychological disorder: A critical reappraisal. *Psychological Bulletin*. 1991; 110:538–543. [PubMed: 1758922]
- Redmore C, Waldman K. Reliability of a sentence completion measure of ego development. *Journal of Personality Assessment*. 1975; 39:236–243. [PubMed: 1185493]
- Rich, A. *Of woman born: Motherhood as experience and institution*. New York: Norton; 1976.
- Rodriguez ML, Shoda Y, Mischel W, Wright JC. Self-regulatory competencies and social adaptation in boys at risk. 1998 Manuscript submitted for publication.
- Rogosch FA, Mowbray CT, Bogat GA. Determinants of parenting attitudes in mothers with severe psychopathology. *Development and Psychopathology*. 1992; 4:469–487.
- Rowe DC, Rodgers JL. Poverty and behavior: Are environmental measures nature and nurture? *Developmental Review*. 1998; 17:358–375.
- Schwartz, GE. Psychobiology of repression and health: A systems approach. In: Singer, JL., editor. *Repression and dissociation*. Chicago: University of Chicago Press; 1990. p. 405-434.
- Shaw DS, Owens EB, Vondra JI, Keenan K, Winslow EB. Early risk factors and pathways in the development of early disruptive behavior problems. *Development & Psychopathology*. 1996; 8:679–699.
- Shrout P, Fleiss JL. Interclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*. 1979; 86:420–428. [PubMed: 18839484]
- Spielberger, CD. *State–Trait Anger Expression Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources; 1996.
- Spitzer, RL.; Williams, JB.; Gibbon, M.; First, MB. *Instruction manual for the Structured Clinical Interview for DSM-III-R: SCID*. New York: Biometrics Research; 1988.
- Strough J, Berg CA, Sansone C. Goals for solving everyday problems across the life span: Age and gender differences in the salience of interpersonal concerns. *Developmental Psychology*. 1996; 6:1106–1115.
- Tabachnik, BG.; Fidell, LS. *Using multivariate statistics*. New York: Harper & Row; 1989.
- Taylor SE, Brown JD. Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*. 1988; 103:193–210. [PubMed: 3283814]
- Warren RW, McEachren L. Psychosocial correlates of depressive symptomatology in adult women. *Journal of Abnormal Psychology*. 1983; 92:151–160. [PubMed: 6863730]
- Weinberger, DA. The construct validity of the repressive coping style. In: Singer, JL., editor. *Repression and dissociation*. Chicago: University of Chicago Press; 1990. p. 337-386.
- Westenberg PM, Block J. Ego development and individual differences in personality. *Journal of Personality and Social Psychology*. 1993; 65:792–800. [PubMed: 8229651]
- White JL, Moffitt TE, Silva PA. A prospective replication of the protective effects of IQ in subjects at high risk for juvenile delinquency. *Journal of Consulting and Clinical Psychology*. 1989; 57:719–724. [PubMed: 2600242]
- White MS. Ego development in adult women. *Journal of Personality*. 1985; 53:561–574. [PubMed: 4087120]
- Zahn–Waxler C. Warriors and worriers: Gender and psychopathology. *Development and Psychopathology*. 1993; 5:79–89.
- Zahn–Waxler C, Kochanska G, Krupnick J, McKnew D. Patterns of guilt in children of depressed and well mothers. *Developmental Psychology*. 1990; 26:51–59.
- Zigler, E.; Glick, M. *A developmental approach to adult psychopathology*. New York: Wiley; 1986.

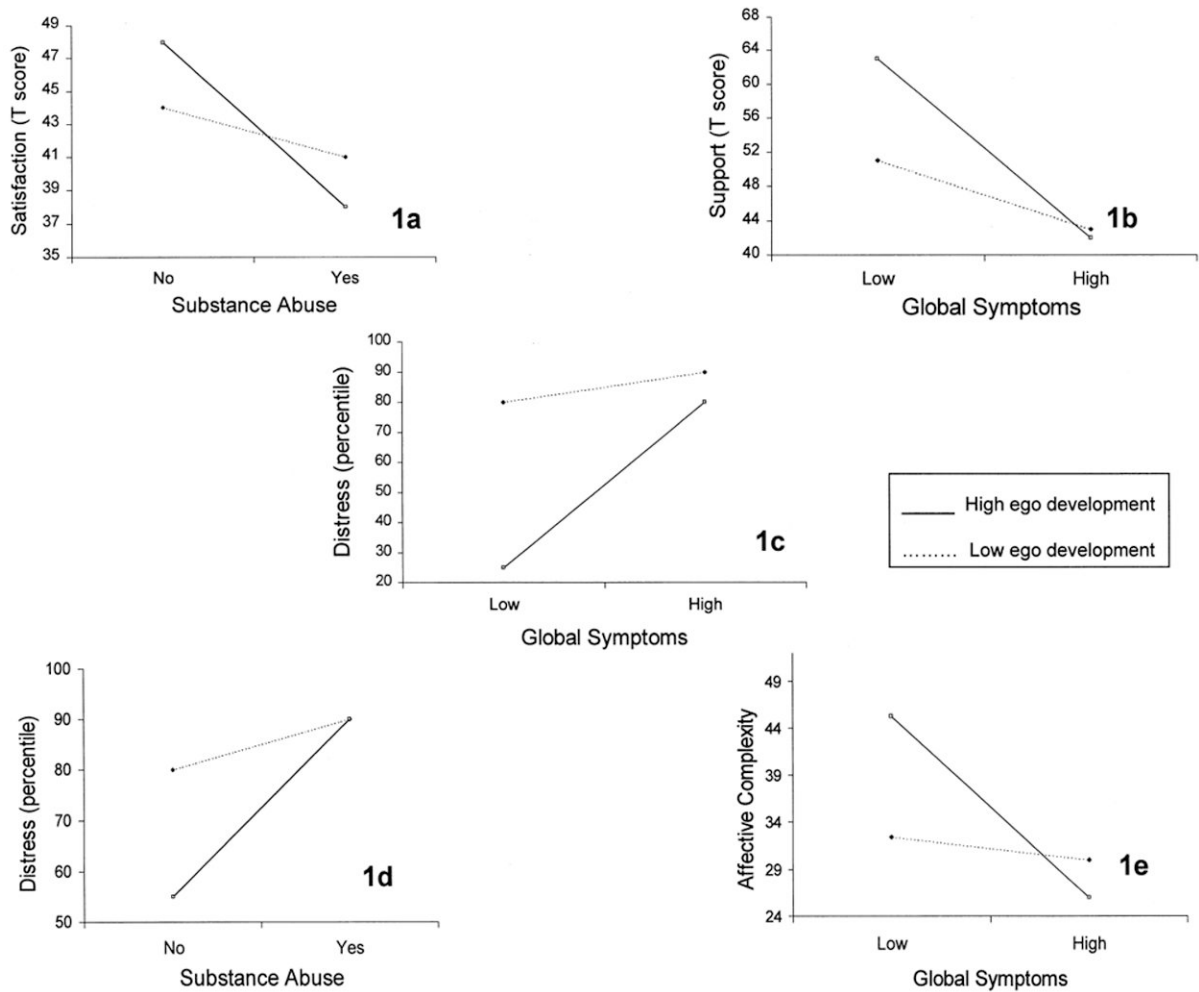


Figure 1.

Interactions between ego development and self-report psychological difficulties in relation to women's emotional experiences in the maternal role. In Figures 1a and 1b, *T* scores of 40 represent cutoffs below which parents are viewed as experiencing clinically significant problems (see Gerard, 1994); similarly, in Figures 1c and 1d parental distress scores above the 80th percentile are clinically significant (Abidin, 1995).

Table 1

Distribution of ego development levels in overall sample by socioeconomic status (SES)

	E2 (Impulsive)	E3 (Self-Protective)	E4 (Conformist)	E5 (Self-Aware)	E6 (Conscientious)
Overall sample	3	34	34	14	6
High SES (Hollingshead 1–2)	0	0	4	1	4
Middle SES (Hollingshead 3)	0	3	7	8	2
Low SES (Hollingshead 4–5)	3	31	23	5	0

Note: None of the women in this sample fell at the three highest stages of ego development (E7, individualistic; E8, autonomous; E9, integrated).

Table 2

Means, standard deviations, and intercorrelations of variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Minority status ^a	(67%)		—									
2. SES (low) ^b	54.80	15.38	.31**	—								
3. Ego development	76.73	7.96	-.33**	-.62**	—							
4. Global symptoms	.73	.59	.08	.35**	-.15	—						
5. Anger expression	27.65	10.33	.16	.36**	-.38**	.53**	—					
6. Maternal substance abuse ^c	(22%)	.42	.09	.37**	-.28*	-.03	.14	—				
7. Current substance abuse	(11%)	.31	.10	.27*	-.23*	.40**	.38**	.15	—			
8. Parenting satisfaction	<i>46.03</i>	<i>10.41</i>	-.35**	-.45**	.42**	-.38**	-.44**	-.39**	-.24*	—		
9. Parenting support	<i>46.66</i>	<i>12.29</i>	-.05	-.33**	.23*	-.61**	-.45**	-.24*	-.22*	.56**	—	
10. Parental distress	30.60 ^d	8.59	.22*	.45**	-.43**	.50**	.50**	.37**	.35**	-.72**	-.67**	—
11. Affective complexity	33.15	13.63	-.25*	-.47**	.34**	-.32**	-.29*	.01	-.23*	.35**	.18	-.28*

Note: Means in italics represent *T* scores.^a1, minority; 0, Caucasian.^bHigh scores represent low SES.^cHistory of having abused substances during the lifetime of at least one biological child.^dCorresponds to 75th percentile.* $p < .05$.** $p < .005$.

Table 3

Hierarchical multiple regression analyses of variables (n = 91)

	Criterion											
	Satisfaction			Support			Distress			Affective Complexity		
	Step	β	ΔR^2	Step	β	ΔR^2	Step	β	ΔR^2	Step	β	ΔR^2
Predictors												
Minority status	1	-.195	.12***	1	.073	.00	1	.053	.05*	1	-.095	.06*
SES	2	.051	.13***	2	.120	.11***	2	-.104	.16***	2	-.346	.17***
Ego development (ED)	3	.238	.02	3	.136	.00	3	-.301	.03 [†]	3	.070	.00
Global symptoms (GS)	4	-.219	.07**	4	-.552	.28***	4	.356	.15***	4	-.115	.03 [†]
Anger expression (AE)	5	-.269	.03 [†]	5	-.217	.01	5	.270	.02 [†]	5	-.165	.00
Maternal substance abuse (MSA)	6	-.435	.07***	6	-.313	.04*	6	.415	.07***	6	.200	.03 [†]
Interaction terms												
ED × GS	7	-.131	.01	7	-.191	.03*	7	.201	.02 [†]	7	-.221	.03*
ED × AE	8	.040	.00	8	-.002	.00	8	-.106	.00	8	.041	.00
ED × MSA	9	-.270	.03*	9	-.168	.01	9	.256	.03*	9	-.033	.00
Total R^2			.48			.49			.53			.34

Note: As recommended by Aiken and West (1991), unstandardized regression coefficients are reported because standardized coefficients are inappropriate with interaction terms; also, interaction terms in these analyses involve centered variables.

[†] $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.