

KARL PILLEMER Cornell University

J. JILL SUITOR Purdue University*

SETH PARDO AND CHARLES HENDERSON, JR. Cornell University**

Mothers' Differentiation and Depressive Symptoms Among Adult Children

Parents' differentiation has been linked to negative psychological and behavioral outcomes in children, adolescents, and young adults. This line of research, however, has not been extended to families in later life. In this article, we use data from 671 mother-child dyads in 275 families in the greater Boston area to explore whether mothers' differentiation among their children is related to psychological well-being among offspring. We examined actual and perceived maternal differentiation in the domains of closeness, expectations for care, and conflict. We hypothesized that depressive symptoms would be higher when mothers differentiated among their children and when adult children perceived differentiation. Although the specific patterns varied somewhat by mothers' and children's reports, the findings indicated that, across all 3 domains, maternal differentiation was related to higher depression scores.

It is now widely accepted that siblings in the same family experience different environments and that one source of variation is individual differences in the parent-child relationship. More than two decades of research have indicated that many parents with preschool, school-age, and adolescent children differentiate among their offspring in terms of closeness, support, and assistance (Suitor, Sechrist, Plikuhn, Pardo, & Pillemer, 2008), sometimes showing greater warmth or negativity to one child over others. Little research, however, has focused on parental differentiation as a characteristic of later life families.

In this article, we examine whether mothers' differentiation among children has negative consequences for the psychological well-being of adult offspring. On the basis of a review of several related literatures, we argue that such differentiation will continue to affect offspring when their parents are in their later years. We used a data set (the Within-Family Differences Study) that included both mothers' and children's assessments of maternal differentiation, allowing us to examine the degree to which both actual differentiation (as reported by the mother) and perceived differentiation (as reported by the child) were related to children's depressive symptoms.

Effects of Parents' Differentiation on Children and Young Adults

Although methods and measures differ across studies, the accumulated evidence indicates

Journal of Marriage and Family 72 (April 2010): 333–345 DOI:10.1111/j.1741-3737.2010.00703.x

Department of Human Development, MVR Hall, Cornell University, Ithaca, NY 14853 (kap6@cornell.edu).

^{*}Department of Sociology, 355 Stone Hall, Purdue University, West Lafayette, IN 47907.

^{**}Department of Human Development, MVR Hall, Cornell University, Ithaca, NY 14850.

Key Words: adult siblings, families in middle and later life, intergenerational relations, parent-child relations.

that parental differentiation is related to poorer psychological well-being in childhood. Researchers have found that differential treatment in early childhood increases externalizing behaviors, such as aggression and acting out, and internalizing symptoms, including depression, anxiety, and poor adjustment (Deater-Deckard, 2000; Dunn, Stocker, & Plomin, 1990; Feinberg & Hetherington, 2001; Harris & Howard, 1984; Kowal, Krull, Kramer, & Crick, 2002; McHale & Gamble, 1989; McHale & Pawletko, 1992). A relationship between differentiation and child well-being has been found in adolescence as well, affecting self-esteem, anxiety, suicidal ideation, and delinquency (Conger & Conger, 1994; De Man, Wong, & Leung, 2003; Feinberg & Hetherington; Scholte, Engels, de Kemp, Harakeh, & Overbeek, 2007; Sheehan & Noller, 2002). Similar results have also been found for young adults, particularly regarding self-esteem, self-confidence, depression, and difficulty in interpersonal relations (Brody, Copeland, Sutton, Richardson, & Guyer, 1998; Rauer & Volling, 2007; Zervas & Sherman, 1994).

It is possible to interpret this pattern of findings as evidence that difficult children increase parents' preference for other offspring and thus increase differentiation, rather than such differentiation affecting children's outcomes. Although it is clear that children's behaviors and temperaments affect these patterns (Tucker, McHale, & Crouter, 2003), there is a growing body of longitudinal research demonstrating that parental differentiation has detrimental effects on children's well-being and behaviors (Conger & Conger, 1994; McGuire, Dunn, & Plomin, 1995; Richmond, Stoker, & Rienks, 2005; Scholte et al., 2007; Shanahan, McHale, Crouter, & Osgood, 2008; Shebloski, Conger, & Widaman, 2005) rather than (or in addition to) the reverse. Further, there is evidence that parental differentiation itself is related more strongly to psychological well-being, rather than whether an individual child is favored or unfavored. For the domains examined in this article, we hypothesize that the absence of maternal differentiation-situations in which parent or child believe that no child in the family is preferred-will be positively related to well-being. This hypothesis is based on the clinical literature on parent-adult child relations and on several recent studies showing that distress may be most strongly related to

whether differentiation occurs, rather than which particular child is chosen.

The clinical literature has documented the psychological costs incurred by either being the favorite or being disfavored. Yahav (2007) described a pattern in which the favored child develops a sense of uniqueness but typically struggles with feelings of guilt about the resulting inequity with siblings. Further, the favored child may experience intense pressure to maintain the favored status and fear losing it (Sharpe & Rosenblatt, 1994). Clinicians also describe feelings of inferiority and hostility among the siblings who are not favored (Haas-Lyon, 2007). Yahav summed up the clinical evidence on this type of differentiation succinctly: "One implication of this clinical interpretation of the effects of parental favoritism on sibling interaction is that the internal dynamics of both the favored child (grandiosity and guilt) and the unpreferred child (jealousy, competitiveness, guilt, inferiority and compensatory grandiosity) may be expressed in pathological symptoms" (p. 462).

Some research has also suggested that preferred status is not unambiguously positive. Boll, Ferring, and Filipp's (2003) review pointed to three potentially negative consequences of being the preferred child. First, children who receive disproportionately positive parental attention may feel empathy for the aversive experiences and emotions of the disfavored sibling. Second, the sibling who does not receive preferential treatment may, as a result of his or her lower status, engage in negative behavior toward the favored one. Third, the preferred sibling may feel greater obligations for reciprocity and thus greater anticipated burdens for helping the parents. Further, Brody and colleagues (1998), in a study of parental favoritism, suggested that both favoritism and disfavoritism may indicate a greater degree of overall family dysfunction, such as enmeshment, high conflict, and low cohesiveness. Several studies of adolescents have found that equally treated children fare better than those who are favored or disfavored (De Man et al., 2003; Harris & Howard, 1984; Zervas & Sherman, 1994).

Thus, there is striking consistency from research spanning several decades on the effects of parental differentiation from early childhood through the college years, indicating that parental preference and differential treatment is related to a variety of negative outcomes. Given this consistency, it is somewhat remarkable that the issue has not been explored among adult children of older parents. The central question to be addressed in this article is: Does maternal differentiation affect the well-being of offspring in midlife?

Parental Differentiation in Later Life Families: Should It Make a Difference?

In recent years, scholars have argued that a promising approach for the study of intergenerational relations involves applying to later life families the concepts and models developed for research on parents and younger children (Fingerman & Bedford, 2000; Pillemer & McCartney, 1991; Pillemer & Suitor, 2005). We propose that frameworks that highlight nonshared environment, differential parenting of children, and their consequences are particularly applicable to the later years. There are several grounds upon which to hypothesize that parental differentiation will continue to be salient to offspring after they become adults.

We begin by noting that studies show that older parents do, in fact, differentiate among their offspring. In particular, a literature on parental favoritism has indicated that parents show preferential treatment. Early research by Aldous, Klaus, and Klein (1985) provided evidence that both mothers and fathers typically prefer some adult children over others in the family. A study of reports from offspring also revealed that adult children often believe that their parents favor certain children (Bedford, 1992). A more recent series of studies provided additional evidence for the phenomenon of parental preference for certain children in later life. Suitor and Pillemer (2007) found that three quarters of mothers named one particular child whom they would choose as a confidant and nearly two thirds named a child to whom they were most emotionally close. The majority of mothers also reported preferences among their adult children in terms of providing emotional and instrumental support (Suitor, Pillemer, & Sechrist, 2006) and expectations for future care (Pillemer & Suitor, 2006).

Thus, parental differentiation among children in later life appears to be common; however, this research does not address the question of whether differentiation has consequences for adult offspring's psychological well-being. There are several compelling arguments that this should be the case, even when children have reached middle age (Boll et al., 2003). First, contact and mutual assistance are frequent among middle-aged offspring and parents; thus the active experience of parent-child relations continues after children are launched and indeed until the death of the parents. Second, processes of social comparison that typically begin in childhood are likely to continue into midlife among siblings. Adult children engage in comparison with siblings across a variety of domains, including similarity or competitiveness regarding relationships with parents. In fact, when it comes to the issue of how one is treated by one's own mother, one's siblings are the most likely target for social comparison (Boll et al.; Feinberg, Neiderhiser, Simmons, Reiss, & Hetherington, 2000).

Third, the early history of attachment and dependency of children on parents is likely to affect the relationship throughout the life course (Rossi & Rossi, 1990; Umberson, 1992) and thus to maintain the impact of differential treatment by parents. It is worth noting that clinical accounts point to the frequency with which issues of parental preferences, unequal treatment of siblings, and resulting distress are topics in psychotherapy among adults (Bieber, 1977; Haas-Lyon, 2007; Sharpe & Rosenblatt, 1994). Indeed, early works in psychoanalysis by Freud, Adler, and others treated the issue of parental preference on human development (Suitor et al., 2008).

To these points we would add the general finding that the quality of older parent-adult child relationships affects children's well-being. Studies have found that intergenerational relationships have a direct effect on adult children's mental health (Barnett, Kibria, Baruch, & Pleck, 1991; Barnett, Marshall, & Pleck, 1992; Welsh & Stewart, 1995). Several surveys using national samples support the finding that the quality of parent-child relations affects adult children's psychological well-being (Amato, 1994; Knoester, 2003; Umberson, 1992). Further, mothers' differentiation appears to have a detrimental effect on the quality of sibling relations in adulthood (Boll et al., 2003; Suitor et al., 2009). Taken together, these findings suggest that it is plausible that a relationship characteristic such as parental differentiation would have a psychological impact on adult children.

In summary, the combined body of research indicates that (a) older parents often

engage in differentiation among their adult children, (b) differentiation has strong effects on well-being earlier in the life course, and (c) parent – child relations continue to be salient and to affect well-being even when the offspring are well into adulthood. On these bases, we hypothesize that mothers' differentiation among offspring will have a significant impact on adult children's psychological well-being when they are in midlife.

Dimensions of Maternal Differentiation

In this study, we examined three forms of differentiation among children that are likely to be salient in older parent—adult child relationships. First, we followed other researchers in distinguishing between positive differentiation and negative differentiation. Measures of warmth and support and conflict and negativity have been found to be distinct constructs in prior research (Feinberg & Hetherington, 2001) and are typically included in studies of parental differentiation (Harris & Howard, 1984; McHale, Updegraff, Tucker, & Crouter, 2000; Sheehan & Noller, 2002). For this reason, in the present study, we included measures of emotional closeness and arguments and disagreements.

We also included a relationship domain that is particularly applicable to families in later life: parental expectations for care. An important dynamic in parent-child relations in later life revolves around both the anticipation of and actual provision of care for parents (Pillemer & Suitor, 2006; Walz & Mitchell, 2007). It is possible that such expectations affect children's well-being. It is worth noting that this dimension has a parallel in the literature on younger families; some studies include the differential assignment of chores to children (Daniels, Dunn, Furstenberg, & Plomin, 1985; McHale & Pawletko, 1992), analogous to the demands for filial responsibility and helping that may occur with older parents (Boll et al., 2003). We examine parental expectations for the most likely caregiver in the analyses presented in this article.

In this domain of expectations for filial care, we hypothesize that a lack of maternal differentiation will lead to more positive outcomes. The experience of being a primary family caregiver has been characterized as involving both positive and negative components (Luescher & Pillemer, 1998; Pillemer & Suitor, 2006). Children may value the parents' confidence in their competence but also worry about disruption of routines and the burden of care (Boll et al., 2003). We therefore expect that adult children will report lower distress in families in which mothers and children assert that the mother does not have a preference for a caregiver.

Actual and Perceived Differentiation

To date, few studies of parental differentiation have incorporated both parents' and children's perspectives. It is important, however, to recognize that differentiation is a dyadic phenomenon, involving both actual differentiation (the parent's report that he or she chooses a particular child) and perceived differentiation (a child's belief that he or she is chosen). Actual differentiation may not be conveyed to the child, given the strong normative pressures on parents for equal treatment of children. Similarly, an egocentric bias may lead children to overestimate their selection as favored (Suitor, Sechrist, Steinhour, & Pillemer, 2006). In one of the few studies that included both parents' and adolescents' perspectives on differential parenting, Kowal, Krull, and Kramer (2006) found that parents and children were likely to perceive preference differently; indeed, dyadic agreement within the family was not statistically significant. Thus, an important contribution of the present study is its inclusion of both actual and perceived differentiation.

In conclusion, on the basis of the review of the literature, we propose the overall hypothesis that differentiation by mothers will negatively affect adult children's psychological well-being. Specifically, we hypothesize that adult children in families in which actual or perceived maternal differentiation exists will report greater psychological distress compared to offspring in families where actual or perceived differentiation is not identified. Finally, although we do not propose a specific hypothesis, we will explore whether actual or perceived differentiation has a greater impact on distress.

We include as controls in the analyses several variables that have been found to predict depressive symptoms in a number of other studies or to be related to parental differentiation. Some research has found depressive symptoms to be higher among women, the unmarried, older persons, individuals with lower levels of education, and those who are unemployed. Further, health problems have been found to be strongly related to depressive symptoms. Proximity to the mother was included in the analyses because it is a strong predictor of intergenerational interaction and assistance. We also included two family-level characteristics as control variables, race and family size, because we have previously found them to be predictors of mothers' likelihood of differentiating among their adult children (Suitor, Sechrist, & Pillemer, 2007). Finally, mothers' self-reported health status was included as a control variable, given the possibility that being selected as the potential caregiver might have greater salience for offspring when the mother is in poorer health.

Method

Sample

We designed the present study to provide data on within-family differences in parent-adult child relations in later life. The first stage of the research design involved selecting a sample of mothers 65-75 years of age with at least two living adult children and collecting data from the mothers regarding each of their children. Massachusetts city and town lists were the source of the sample. Massachusetts requires communities to keep city and town lists of all residents by address that also provide the age and gender of residents. We drew a systematic sample of women ages 65-75 from the city and town lists from 20 communities in the greater Boston area. Between August of 2001 and January of 2003, interviewers collected data from 566 mothers, which represented 61% of those who were eligible for participation. Face-to-face interviews with the mothers took between 1 and 2 hr.

The second stage of the research design involved direct interviews with respondents' adult children. At the end of each interview, the interviewers told the mothers about the study component involving adult children and asked if they would provide contact information for their children. Approximately 63% (n = 358) of the mothers agreed to provide information and approximately 70% of those children agreed to participate. We completed interviews with at least one child in 299 families, resulting in a sample of 774 adult children. We conducted telephone interviews with the children, which allowed us to maintain a single mode of data collection despite the fact that some of the children lived in distant parts of the country.

Analyses comparing mothers who provided contact information for their children and those who did not provide contact information revealed no differences between these mothers in terms of race, marital status, education, age, or number of children. Some differences did exist, however, in the characteristics of adult children for whom mothers provided contact information. Mothers were more likely to provide contact information for daughters and for children who were better educated and younger children; there were no differences by children's employment or marital status. Mothers were also more likely to provide contact information for children to whom they felt closer and had less conflict. As noted, 70% of the children contacted agreed to participate. Daughters, married children, employed children, and those with higher education were slightly more likely to participate, consistent with other studies of multiple generations in the family (Rossi & Rossi 1990). Children with fewer disagreements with their mothers were also more likely to participate. Interviews with the children were carried out between January of 2002 and August of 2003. The interviews lasted approximately 40 min.

This article used data from interviews with the 275 (92% of mothers with respondent children) mothers who had at least one child participating in the study and the 671 (87% of children interviewed) adult children on whom we had complete data for the present analyses. There were 103 (13% of children interviewed) cases with missing or incomplete data on one or more of the variables included in the analysis. These cases were deleted using listwise deletion. The majority of these cases had missing data on the choice variables or CES-D. An analysis of these deleted cases showed minimal differences from the sample included in this paper. There were no significant differences in the gender, marital status, or average age of children in this sample compared to those deleted because of missing data. Those deleted had a slightly higher average education (mean = 5.40, SD 1.57) than those children who remained in the sample (mean = 4.93, SD = 1.6).

Sample Characteristics

Mothers' characteristics. The mothers were between 65 and 75 years of age (M = 70.9, SD = 3.2) at the time the interviews were conducted. Fifty-one percent of the mothers were

currently married, 37% were widowed, and 12% were divorced or separated. Eighteen percent of the mothers had completed less than high school, 41% had completed high school, 18% had completed some college, and 23% had completed college. Seventy percent were not employed. Twenty-eight percent had a total family income of less than \$20,000 in the previous year, 23% had an income between \$20,000 and \$29,999, 14% had an income between \$30,000 and \$39,999, 10% had an income between \$40,000 and \$49,999, and 25% had an income \$50,000 or greater.

In the present subsample, 20% of the mothers were Black; 80% were White. We omitted from the full sample four (0.7%) Hispanic, three (0.5%) Asian, and one (0.2%) Native American family because the literature on kin relations indicates that these families should not be combined with either of the larger subgroups and there are too few cases to justify creating further ethnic subgroups for analysis (Spitze & Trent, 2006).

The number of living children ranged from 2 to 11 (M = 3.8, SD = 21.8). Although the mean number of living children in this sample is higher than would be found in a nationally representative sample of women ages 65-75, this is due primarily to the criterion that all participants must have at least two living adult children. The mean number of children of women in the subsample is similar to that found in national samples (e.g., Sweet & Bumpass, 1996), when compared specifically to mothers in the same age group who have two or more children.

Adult children's characteristics. The adult children ranged from 21 to 61 years of age (M = 42.6, SD = 5.8). Fifty-six percent were daughters. Sixty-one percent of the adult children were currently married, 7% were cohabiting, 12% were divorced or separated, 19% were never married, and 1% was widowed. Twenty-three percent of the adult children had completed high school, 19% had completed some college, 32% were college graduates, and 19% had completed some graduate work. Eighty-six percent of the children were employed. Seventy-four percent were themselves parents (mean number of children = 1.7, SD = 1.4).

Measures

Maternal differentiation. We asked the mothers a set of items in which we specifically asked

them to differentiate among their children. The items used in the present analysis asked about differentiation regarding closeness, caregiving, and conflict: (a) To which child in your family do you feel the most emotional closeness? (b) If you became ill or disabled and needed help on a dayto-day basis, which child in your family would be most likely to help you? (c) With which child do you have the most disagreements or arguments? Most mothers responded unambiguously, either naming a particular child or saying that they could not choose among their children. Because the questions were designed to elicit only one child's name, almost all mothers named only one child. In rare instances, mothers instead asked whether they were required to name a child; in these cases, the interviewers explained that the mothers could answer in whatever way they were most comfortable; in others words, they could name one child, more than one child, or no children. In two domains a small number of mothers with three or more living children named two children (4% for the expected caregiver and 1% for emotional closeness). None of the mothers named more than one child with whom they had the most conflict. All of the dyads were included in the analysis regardless of whether the mother named one or more than one child.

On the basis of the mother's reports, each child was coded as 0 for each item for which he or she was not chosen and 1 for each item for which she or he was chosen. Mothers could also indicate that there was no differentiation among their children for each domain. For the present analyses, we used these data to create a single dummy variable for each relational domain which was coded 0 (*no differentiation among children*) or 1 (*mother named a preferred child*).

The procedures used to measure adult children's perceptions of differentiation mirrored those asked of the mothers. Specifically, each child was asked the following: (a) To which child in your family do you think your mother feels the most emotional closeness? (b) If your mother became ill or disabled and needed help on a day-to-day basis, which child in your family would be most likely to help her? (c) With which child does your mother have the most disagreements or arguments? Similar to the mothers, few adult children mentioned more than one child (approximately 5% percent for care provision, 3% for emotional closeness, and 1% regarding conflict). Dependent variable. Depressive symptoms were chosen as an indicator of psychological distress because it is one of the most prevalent mental health problems in the United States (Kessler, 1997, 2002). In addition, depression has been used frequently in studies that explore the effects of family relationships on well-being. We employed the seven-item version of the Center for Epidemiological Studies Depression (CES-D) Scale (Ross & Mirowsky, 1984). The CES-D asks respondents how often in the past week they have felt a certain way. It should be noted that the CES-D is not intended for use as a diagnostic tool; rather, it provides a valid and reliable means for ordering individuals on the basis of the frequency and severity of their symptoms. The CES-D Scale's reliability and validity for use in community surveys has been clearly established (Radloff, 1977). The items composing the scale are: Everything I did was an effort, I had trouble getting to sleep or staying asleep, I felt lonely, I felt sad, I could not get going, I felt I could not shake off the blues, I had trouble keeping my mind on what I was doing. In this sample, the scale ranged from 0 to 21, with a mean of 4.3 $(\alpha = .78).$

Control variables. Family-level controls were race (0 = White, 1 = Black) and number of adult children in the family. At the mother level, self-reported health had five categories (1 = poor, 2 = fair, 3 = good, 4 = very good,5 = excellent). Child-level control variables included marital status (0 = child not married,1 = child married, employment status (0 =not employed, 1 = employed, parental status (0 = no children, 1 = has child), age in years, and gender (0 = son, 1 = daughter). Child's education was coded 1 (less than high school), 2 (some high school), 3 (high school graduate), 4 (post-high school vocational), 5 (some college), 6 (college graduate), or 7 (completed graduate school). Proximity was measured by the distance the child lived from the mother by ground transportation. Categories were 1 = same house, 2 = same neighborhood, 3 =less than 15 minutes away, 4 = 15 - 30 minutes away, 5 = 30 - 60 minutes away, 6 = more than an hour but less than two hours, and 7 = twoor more hours away. The measure of child's self-reported health was identical to that for mothers.

Analytic Strategy

Each of the 671 adult children is nested within one of 275 families; thus, the observations are not independent. To address this concern we conducted multilevel analyses using SPSS software (version 16) for hierarchical linear modeling (HLM). Multilevel modeling procedures account for the independence assumption and allow for correlated error structures. For each domain of differentiation (emotional closeness, expectations for care, and arguments/disagreements) two models are calculated: one for the children's reports and one for mothers' reports. Included in each model is a dummy variable indicating whether the mother did or did not differentiate among her children (or was perceived as differentiating or not).

RESULTS

Patterns of Differentiation

The majority of mothers expressed choices on all three dimensions of differentiation. Seventy percent of the mothers named a child to whom they felt closest, 79% named a child as the most likely caregiver, and 73% specified a child with whom she had the most arguments and disagreements. In general, children were substantially more likely to believe that the mother made a choice than was actually the case. For emotional closeness, 15% of the children reported no favoritism, whereas 30% of the mothers made no choice. Similarly, only 9% of children reported no favoritism regarding caregiving, whereas 21% of the mothers made no choice, and only 8% reported no choice regarding conflict, although 27% of mothers in fact did not choose a particular child. Only modest correlations were found among the three dimensions, ranging from .1 to .2 both for mothers and for children.

Emotional Closeness

Model 1 in Table 1 presents the relationship between depression scores and adult children's reports of mothers' differentiation regarding emotional closeness. The analysis revealed that children's depression scores were higher when they perceived that their mothers differentiated among offspring regarding emotional closeness; that is, when they believed the mother was closest to a particular child in the family. This finding is on the borderline of statistical

Predictors	Model 1		Model 2	
	Estimate	SE	Estimate	SE
Family-level characteristics				
Race	-0.702	0.490	-0.768	0.494
Family size	-0.056	0.088	-0.041	0.090
Mother-level characteristic				
Health status	-0.143	0.178	-0.136	0.178
Child-level characteristics				
Age	-0.019	0.029	-0.024	0.029
Daughter	0.062	0.329	0.086	0.330
Education	-0.257^{*}	0.116	-0.254^{*}	0.117
Employment status	-0.391	0.462	-0.374	0.463
Married	-0.865^{*}	0.351	-0.888^{*}	0.351
Geographic distance from mother	0.207*	0.090	0.224*	0.090
Health status	-1.198^{**}	0.172	-1.208^{**}	0.172
Adult children's reports of differentiation	0.857^{+}	0.460	—	_
Mothers' reports of differentiation	—	_	-0.307	0.384
Model statistics				
BIC	3,821.211		3,824.387	
AIC	3,812.232		3,815.408	
Parameters	14			

 Table 1. Mixed Model Results of Adult Children's Depressive Symptoms and Mothers' Differentiation Regarding Emotional Closeness (N = 671)

 $^{+}p < .10; ^{*}p < .05; ^{**}p < .01.$

significance (p < .06). Model 2 in Table 1 presents the relationship between depressive symptoms and mothers' actual reports regarding emotional closeness. This analysis showed no effect of mothers' reports of favoritism on their adult children's depression scores. Thus, only the children's belief that their mother did not choose a particular child was related to somewhat lower depression scores.

Expectations for Caregiving

Model 1 in Table 2 presents the relationship between depression scores and adult children's expectations regarding who will provide care when mothers become ill or disabled. This analysis showed no relationship between children's perceptions of mothers' expectations regarding care and depressive symptoms. As shown in Model 2, however, children's depression scores were higher when mothers differentiated among their children regarding expectations for care.

Arguments and Disagreements

Table 3 presents the relationship between depression scores and within-family differences

in mothers' conflict with their children. As shown in Model 1, adult children who reported that their mothers had greater conflict with a particular child in the family reported higher depression scores. As shown in Model 2, depressive symptoms were not related to mothers' actual differentiation among children with regard to conflict.

DISCUSSION

The present study hypothesized that the well-established relationship between mothers' differentiation and psychological well-being among young children and adolescents would also be evident in later-life families. It expanded on previous research by applying a withinfamily design to relationships between older mothers and their adult children, focusing on three domains, emotional closeness, negativity, and expectations for caregiving. Consistent with studies of earlier stages of the life course, we found evidence for a relationship between depressive symptoms and all three types of maternal differentiation (the coefficient for emotional closeness was significant at the .06 level).

Predictors	Model 1		Model 2	
	Estimate	SE	Estimate	SE
Family-level characteristics				
Race	-0.669	0.490	-0.693	0.484
Family size	-0.068	0.088	-0.051	0.087
Mother-level characteristic				
Health status	-0.149	0.178	-0.146	0.176
Child-level characteristics				
Age	-0.023	0.029	-0.025	0.029
Daughter	0.076	0.329	0.081	0.328
Education	-0.263^{*}	0.116	-0.266^{*}	0.116
Employment status	-0.399	0.463	-0.358	0.461
Married	-0.893	0.351	-0.894^{*}	0.350
Geographic distance from mother	0.224*	0.089	0.224	0.089
Health status	-1.194**	0.172	-1.196**	0.172
Adult children's reports of differentiation	0.883	0.592	_	_
Mothers' reports of differentiation			0.867*	0.412
Model statistics				
BIC	3,821.938		3,820.553	
AIC	3,812.960		3,811.574	
Parameters	14		14	

Table 2. Mixed Model Results of Adult Children's Depressive Symptoms and Mothers' Differentiation Regarding Expectations for Care (N = 671)

 $p^* < .05; p^* < .01.$

Table 3. Mixed Model Results of Adult Children's Depressive Symptoms and Mothers' Differentiation Regarding Conflict (

N =	<i>671)</i>
-----	-------------

Predictors	Model 1		Model 2	
	Estimate	SE	Estimate	SE
Family-level characteristics				
Race	-0.661	0.486	-0.714	0.490
Family size	-0.058	0.087	-0.055	0.088
Mother-level characteristic				
Health status	-0.138	0.177	-0.130	0.180
Child-level characteristics				
Age	-0.020	0.029	-0.024	0.029
Daughter	0.091	0.328	0.110	0.330
Education	-0.262^{*}	0.116	-0.263*	0.117
Employment status	-0.349	0.461	-0.360	0.463
Married	-0.845^{*}	0.351	-0.907^{*}	0.353
Geographic distance from mother	0.225*	0.089	0.222*	0.090
Health status	-1.210^{**}	0.172	-1.202**	0.172
Adult children's reports of differentiation	1.244*	0.597	—	_
Mothers' reports of differentiation	_	_	-0.153	0.381
Model statistics				
BIC	3,819.836		3,824.883	
AIC	3,810.857		3,815.905	
Parameters	14		14	

p < .05; p < .01.

341

These results held when controlling for factors that prior research has shown to be associated with depressive symptoms and maternal differentiation.

A contribution of the study was the ability to explore the effects of both mothers' reports of differentiation and children's perceived differentiation. This feature of the study was valuable because in none of the three dimensions were both actual and perceived differentiation related to depressive symptoms. Mothers' reports of differentiation regarding expectations for care were associated with children's higher depressive symptoms, whereas mothers' actual differentiation regarding emotional closeness and conflict were not. In contrast, children's perceptions of differentiation regarding both conflict and emotional closeness were associated with depressive symptoms. Perceived differentiation regarding expectations for mothers' care did not affect depressive symptoms, however. Inclusion of both actual and perceived maternal differentiation is therefore highly recommended in future research.

It is not surprising that children's perceptions that their mothers chose some offspring over others regarding closeness and conflict affected depressive symptoms; it is less obvious why mothers' reported differentiation regarding expectations for care had similar consequences. In the absence of detailed descriptive data, it is not possible to determine why the mothers' reports of expectations had a stronger effect than did differentiation regarding closeness or conflict. We can speculate, however, that expectations for caregiving may be more obvious to children than are the other two dimensions and may, in fact, be formally recognized in the family (e.g., through a legal arrangement or by co-residence) and discussed explicitly by family members (Pillemer & Suitor, 2006). In contrast, emotional closeness and interpersonal stress such as arguments and disagreements are somewhat more subjective than a planned future caregiving arrangement. Future research should be conducted regarding how mothers' expectations for a caregiver affects adult children's well-being.

On the conceptual level, we believe that the findings support the usefulness of drawing upon concepts and models from the study of young families and applying them to later life. Such is the case with the topic of this article—withinfamily differences in relations between older parents and adult children. Despite the evidence discussed earlier that some dimensions of within-family differences, such as parental differentiation, exist across the life course, the designs of most studies of intergenerational relations in later life do not permit an examination of within-family differentiation. Almost all studies have asked parents about their adult children in the aggregate rather than about each child separately or have focused on only one target child. Highlighting the effects of mothers' differentiation in three domains, our data support the assertion that individual parent-child dyads within a single family constitute to some degree separate microenvironments that differ among themselves. Further, these patterns of differentiation appear to be related to depressive symptoms.

Limitations and Directions for Future Research

The results of the present study demonstrate that differentiation within the family in later life is a reality and one with consequences not only for young children and adolescents but also for adults in middle age. These findings corroborate prior work on the topic of the effects of differentiation among children in families and thereby suggest that expanded research on the topic is well justified. Future investigations of the topic of parental differentiation and well-being are likely to have important implications for both the study of the aging family and for practice. We highlight several promising directions for research here.

First, in this study we considered only mothers' differentiation. A priority should be given to research that contrasts the effects of mothers' differentiation with that of fathers. Such comparisons between mothers and fathers may reveal variations in the consequences of differentiation, given well-established gender differences in parent-adult child relations. It is interesting to note that research has found few gender differences in the effects of differential parenting among parents of young children and adolescents (Kowal & Kramer, 1997; McHale, Updegraff, Jackson-Newsom, & Tucker, 2000; O'Conner, Dunn, Jenkins, & Rasbash, 2006; Tucker et al., 2003; Volling & Elins, 1998). Nevertheless, research on the effects of fathers' differentiation in later life families should be a high priority for research. Further, studies that have included both parents have tended to focus on mothers' and fathers' differential parenting

as independent dynamics; as Kan and colleagues asserted (2008), greatly needed is research on within-family patterns of differentiation by mothers and fathers. For example, what is the effect when mothers' and fathers' patterns of differentiation differ from one another in the same family?

Third, future research should examine contextual factors that may affect the relationship between parents' differentiation and children's depressive symptoms. One promising domain in which to examine how parental differentiation and psychological well-being are mediated is justice evaluations or fairness (Boll et al., 2005; Kowal & Kramer, 1997; McHale et al., 2000). These studies and related research suggest that the effects of parental differentiation are less negative if children perceive the situation as fair. Justice evaluations may be especially important in one issue specific to this particular life-course stage: distribution of care responsibilities for the parent. For example, an adult child might believe that her mother prefers a sibling but attribute that preference to the sibling's greater availability or contribution to the mother's care and thus perceive it as fair. Future research that examines the influence of adult children's attributions about why parental differentiation occurs would be very useful. Another contextual variable that should be addressed in future research is the influence of ethnicity and culture. It is possible that parental differentiation may have less impact when strong and consistent cultural guidelines for children's obligations exist, such as who will provide care for parents.

Third, the study is limited by its crosssectional nature. Specifically, in this data set we cannot separate cause and effect in the relationship between maternal differentiation and psychological outcomes. It may be the case that if an adult child is depressed, he or she may be more likely to view parental treatment as unequal. Similarly, a parent may be more likely to differentiate among offspring when one child is depressed. As Daniels and colleagues (1985) argued, however, although the cause-and-effect question is an important one, a crucial first step is to establish whether withinfamily environmental factors bear a relationship to outcomes of interest and then turn to the direction of effects. That is, to determine whether this line of research is worth pursuing, it is necessary first to examine the relationships in cross-sectional data. The present study provides

a positive answer to the primary question of whether maternal differentiation is related to well-being among adult children. A pressing need, therefore, is for longitudinal studies of the consequences of within-family differences in later life families.

NOTE

This project was supported by grants RO1 AG18869-01 and 2RO1 AG18869-04 from the National Institute on Aging. K. Pillemer also acknowledges support from Grant 1 P30 AG022845, an Edward R. Roybal Center grant from the National Institute on Aging. We thank Mary Ellen Colten and her colleagues at the University of Massachusetts, Boston, for collecting the data for the project.

REFERENCES

- Aldous, J., Klaus, E., & Klein, D. M. (1985). The understanding heart: Aging parents and their favorite children. *Child Development*, 56, 303-316.
- Amato, P. R. (1994). Father-child relations, motherchild relations, and offspring psychological wellbeing in early adulthood. *Journal of Marriage and the Family*, 56, 1031–1042.
- Barnett, R. C., Kibria, N., Baruch, G. K., & Pleck, J. H., (1991). Adult daughter-parent relationships and their associations with daughters' subjective well-being and psychological distress. *Journal of Marriage and the Family*, 53, 29–42.
- Barnett, R. C., Marshall, N. L., & Pleck, J. H., (1992). Men's multiple roles and their relationship to men's psychological distress. *Journal of Marriage* and the Family, 54, 358–367.
- Bedford, V. H. (1992). Memories of parental favoritism and the quality of parent-child ties in adulthood. *Journal of Gerontology: Social Sciences*, 47, S149–S155.
- Bieber, I. (1977). Pathogenicity of parental preference. Journal of American Academy of Psychoanalysis, 5, 291–298.
- Boll, T., Ferring, D., & Filipp, S. H. (2003). Perceived parental differential treatment in middle adulthood curvilinear relations with individuals' experienced relationship quality to sibling and parents. *Journal of Family Psychology*, 17, 472–487.
- Boll, T., Ferring, D., Filipp, S. H. (2005). Effects of parental differential treatment on relationship quality with siblings and parents: Justice evaluations as mediators. *Social Justice Research*, 18, 155–182.
- Brody, L. R., Copeland, A. P., Sutton, L. S., Richardson, R., & Guyer, M. (1998). Mommy and daddy like you best: Perceived family favouritism in relation to affect, adjustment, and family process. *Journal of Family Therapy*, 20, 269–291.
- Conger, K. J., & Conger, R. D. (1994). Differential parenting and change in sibling differences in

delinquency. Journal of Family Psychology, 8, 287-302.

- Daniels, D., Dunn, J., Furstenburg, F. F., & Plomin, R. (1985). Environmental differences within the family and adjustment differences within pairs of adolescent siblings. *Child Development*, 56, 761–774.
- Deater-Deckard, K. (2000). Parenting and child behavioral adjustment in early childhood: A quantitative genetic approach to studying family processes. *Child Development*, *71*, 468–484.
- De Man, A. F., Wong, I. N., & Leung, W. L. (2003). Perceived parental favoritism and suicidal ideation in Hong Kong adolescents. *Social Behavior and Personality*, 3, 245–252.
- Dunn, J., Stocker, C., & Plomin, R. (1990). Nonshared experiences within the family: Correlates of behavioral problems in middle childhood. *Development and Psychopathology*, 2, 113–126.
- Feinberg, M. E., & Hetherinton, E. M. (2001). Differential parenting as a within-family variable. *Journal of Family Psychology*, 15, 22–37.
- Feinberg, M. E., Neiderhiser, J. M., Simmons, S., Reiss, D., & Hetherinton, E. M. (2000). Sibling comparison of differential parental treatment in adolescence: Gender, Self-esteem, and emotionality as mediators of the parent-adjustment association. *Child Development*, 71, 1611–1628.
- Fingerman, K. L., & Bedford, V. H. (2000). Lessons from the early years: Infusing gerontology with ideas from child development. *International Journal of Aging and Human Development*, 51, 1-4.
- Haas-Lyon, S. (2007). To outdo or undo? Siblings and hysteria. *Studies in Gender and Sexuality*, 8, 1-26.
- Harris, I. D., & Howard, K. I. (1984). Parental criticism and the adolescent experience. *Journal of Youth and Adolescence*, 13, 113–121.
- Kan, M. L., McHale, S. M., & Crouter, A. C. (2008). Interparental incongruence in differential treatment of adolescent siblings: Links with marital quality. *Journal of Marriage and Family*, 70, 466–479.
- Kessler, R. C. (1997). The effects of stressful life events on depression. *Annual Review of Psychology*, 48, 191–214.
- Kessler, R. C. (2002). Epidemiology of depression. In C. Hammen & I. Gotlib (Eds.), *Handbook* of depression (pp. 23–42). New York: Guilford Press.
- Knoester, C. (2003). Transitions in young adulthood and the relationship between parent and offspring well-being. *Social Forces*, *81*, 1431–1457.
- Kowal, A., & Kramer, L. (1997). Children's understanding of parental differential treatment. *Child Development*, 68, 113–126.
- Kowal, A. K., Krull, J. L., & Kramer, L. (2006). Shared understanding of parental differential

treatment in families. Social Development, 15, 277-295.

- Kowal, A. K., Krull, J. L., Kramer, L., & Crick, N. R. (2002). Children's perceptions of the fairness of parental preferential treatment and their socioemotional well-being. *Journal of Family Psychology*, 16, 297–306.
- Luescher, K., & Pillemer, K. (1998). Intergenerational ambivalence: A new approach to the study of parent-child relations in later life. *Journal of Marriage and the Family*, 60, 413–445.
- McGuire, S., Dunn, J., & Plomin, R. (1995). Maternal differential treatment of siblings and children's behavioral problems: A longitudinal study. *Devel*opment and Psychopathology, 7, 515–528.
- McHale, S. M., & Gamble, W. C. (1989). Sibling relationships of children with disabled and nondisabled brothers and sisters. *Developmental Psychology*, 25, 421–429.
- McHale, S. M., & Pawletko, T. M. (1992). Differential treatments of siblings in two family contexts. *Child Development*, 63, 68–81.
- McHale, S. M., Updegraff, K. A., Tucker, C. J., & Crouter, A. C. (2000). When does parents' differential treatment have negative implications for siblings? *Social Development*, 9, 149–172.
- O'Conner, T. G., Dunn, J. Jenkins, J. M., & Rasbash, J. (2006). Predictors of between-family and within-family variation in parent-child relationships. *Journal of Child Psychology and Psychiatry*, 47, 498-510.
- Pillemer, K., & McCartney, K. (Eds.). (1991). Parentchild relations throughout life. New York: Erlbaum.
- Pillemer, K., & Suitor, J. J. (2005). Ambivalence in intergenerational relations over the life-course. In M. Silverstein, R. Giarrusso, & V. L. Bengtson (Eds.), *Intergenerational relations across time and place* (pp. 3–28). New York: Springer.
- Pillemer, K., & Suitor, J. J. (2006). Making choices: A within-family study of caregiver selection. *The Gerontologist*, 46, 439–448.
- Radloff, L. S. (1977). The CES-D scale: A selfreport depression scale for research in the general population, *Applied Psychological Measurement*, 1, 385–401.
- Rauer, A. J., & Volling, B. L. (2007). Differential parenting and sibling jealousy: Developmental correlates of young adults' romantic relationships, *Personal Relationships*, 14, 495–511.
- Richmond, M. K., Stoker, C. M., & Rienks, S. L. (2005). Longitudinal associations between sibling relationship quality, parental differential treatment, and children's adjustment. *Journal of Family Psychology*, 19, 550–559.
- Ross, C. E., & Mirowsky, J. (1984). Components of depressed mood in married men and women: The center for epidemiologic studies depression

scale. American Journal of Epidemiology, 119, 997-1004.

- Rossi, A. S., & Rossi, P. H. (1990). Of human bonding: Parent-child relations across the life course. Hawthorne, NY: Aldine de Gruyter.
- Scholte, R. H., Engels, R. M., de Kemp, R. A., Harakeh, Z., & Overbeek, G. (2007). Differential parental treatment, sibling relationships, and delinquency in adolescence, *Journal of Youth and Adolescence*, *36*, 661–671.
- Shanahan, L., McHale, S. M., Crouter, A. C., & Osgood, D. W. (2008). Linkages between parents' differential treatment, youth depressive symptoms, and sibling relationships. *Journal of Marriage and Family*, 70, 480–493.
- Sharpe, S. A., & Rosenblatt, A. D. (1994). Oedipal sibling triangles. *Journal of the American Psycho*analytic Association, 42, 491–523.
- Shebloski, B., Conger, K. J., & Widaman, K. F. (2005). Reciprocal links among differential parenting, perceived partiality, and self-worth: A three-wave longitudinal study. *Journal of Family Psychology*, 19, 633–642.
- Sheehan, G., & Noller, P. (2002). Adolescents' perceptions of differential parenting: Links with attachment style and adolescent adjustment. *Personal Relationships*, *9*, 173–190.
- Spitze, G., & Trent, K. (2006). Gender differences in adult sibling relations in two-child families. *Journal of Marriage and Family*, 68, 977–992.
- Suitor, J. J., & Pillemer, K. (2007). Mothers' favoritism in later life: The role of children's birth order. *Research on Aging*, 29, 32–55.
- Suitor, J. J., Pillemer, K., & Sechrist, J. (2006). Within-family differences in mothers' support to adult children. *Journal of Gerontology: Social Sciences*, 61B, S10–S17.
- Suitor, J. J., Sechirst, J., & Pillemer, K. (2007). When mothers have favorites: Conditions under which mothers differentiate among their adult children. *Canadian Journal on Aging*, 26, 85–99.
- Suitor, J. J., Sechrist, J., Plikuhn, M., Pardo, S., Gilligan, M., & Pillemer, K. (2009). The role of parental favoritism in sibling relations in midlife. *Journal of Marriage and Family*, 71, 1026–1038.

- Suitor, J. J., Sechrist, J., Plikuhn, M., Pardo, S. T., & Pillemer, K. (2008). Within-family differences in parent-child relations across the life course. *Current Directions in Psychological Science*, 17, 334–338.
- Suitor, J. J., Sechrist, J., Steinhour, M., & Pillemer, K. (2006). 'I'm sure she chose me!' Consistency in intergenerational reports of mothers' favoritism in later-life families. *Family Relations*, 55, 526-538.
- Sweet, J. A., & Bumpass, L. L. (1996). The national survey of families and households—Waves 1 and 2: Data description and documentation. Madison: Center for Demography and Ecology, University of Wisconsin-Madison. Retrieved May 5, 2008, from http://www.ssc.wisc.edu/nsfh/home.htm
- Tucker, C. J., McHale, S. M., & Crouter, A. C. (2003). Dimensions of mothers' and fathers' differential treatment of siblings: Links with adolescents' sextyped personal qualities. *Family Relations*, 52, 82–89.
- Umberson, D. (1992). Relationships between adult children and their parents: Psychological consequences for both generations. *Journal of Marriage and the Family*, 54, 664–674.
- Volling, B. L., & Elins, J. L. (1998). Family relationships and children's emotional adjustment as correlates of maternal and paternal differential treatment: A replication with toddler and preschool siblings. *Child Development*, 69, 1640–1656.
- Walz, H. S., & Mitchell, T. E. (2007). Adult children and their parents' expectations of future elder care needs. *Journal of Aging and Health*, 19, 482–499.
- Welsh, W. M., & Stewart, A. J. (1995). Relationships between women and their parents: Implications for midlife well-being. *Psychology and Aging*, 10, 181–190.
- Yahav, R. (2007). The relationship between children's and adolescents' perceptions of parenting style and internal and external symptoms. *Child: Care, Health and Development*, 33, 460–471.
- Zervas, L. J., & Sherman, M. F. (1994). The relationship between perceived parental favoritism and self-esteem. *Journal of Genetic Psychology*, 155, 25–33.