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When Parents Matter to Their Adult Children: Filial Reliance Associated With Parents' Depressive Symptoms

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Abstract

A neglected topic in aging depression research is the potential role of the parent–adult child relationship. In this study we examined whether adult children's reports of having relied upon parents for instrumental and expressive support are associated with parents' depressive symptoms. The sample included 304 parents (aged 50–72 years), matched to a randomly selected adult offspring, from the University of Southern California Longitudinal Study of Generations. We measured parents' depressive symptoms by using the Center for Epidemiologic Studies Depression Scale at baseline and 3 and 6 years later. The final longitudinal analysis showed that, when we adjusted for relevant variables including age, gender, income, self-rated health, and child's depressive symptoms, the adult child's reliance on instrumental support was associated with fewer parental depressive symptoms (p = .036). Expressive support did not show the same pattern. Thus, adult children's reliance on instrumental support might contribute to their parents' mental health.

Keywords

Depression; Mental Health; Social support; Intergenerational; Parent–adult child relationship

One of the neglected topics in studies of depressive symptoms in midlife and older persons is the influence of the parent–adult child relationship. The developmental aging process of children and parents indicates that the pattern of influence between them changes over time (Bengtson, 1996; Hess & Waring, 1982; Schaffer, 1999); as children become older, they are better able to influence their parents (Glass, Bengtson, & Dunham, 1986). To our knowledge, the present study is among the first to examine the association between the adult child's reports of reliance upon parental support and parents' depressive symptoms.

Most studies of depression and parent–child relationships have focused on the child's mental health and the cause–effect pathway going from parent to child (Bowlby, 1977, 1988; Schaffer, 1999; Shaw & Dallos, 2005). Most of these studies focused on parental influence in early life. Even Freud considered adolescence the last major period of development when parent–child relationships were highly influential, affecting a child's mental well-being

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(Birch, 1997). Research that does exist with adult children has mostly focused on the effect of the parent–child relationship on the adult child (Andersson & Stevens, 1993; Lindelow, 1999; Matheson, Kelly, Cole, Tannenbaum, Dodd, & Anisman, 2005; Pearson, Cowan, Cowan, & Cohn, 1993; Roberts & Bengtson, 1993; Silverstein & Bengtson, 1997) rather than the content of the parent–adult child interaction and its influence on the parent (Schaffer; Silverstein & Bengtson, 1994; Umberson, 1989). The few studies that have examined the effects of parent–child interactions on parental mental health have measured the quality of the relationship only from the parent's perspective (Dunham, 1995; Mancini & Blieszner, 1989; Silverstein & Bengtson, 1994; Umberson). As Schaffer points out, however, "relationships are composed of networks of inextricably interwoven forces and that therefore new levels of analysis and new, specifically dyadic concepts are required to do justice to them" (p. 279). The child's perspective, therefore, is an integral part of the relationship and may affect the parent's own mental health. In addition, assessment of the child's perspective offers a methodological advantage. Because the associations involving reports of quality of relationships and well-being are always suspect when there is only one respondent providing information about both the independent and the dependent variables, attainment of the child's perspective adds to the validity of the analysis.

In addition, prior research on parent–child relationships and the well-being of older parents has mostly involved frequency of contact, assuming that the greater the contact, the greater the parent's well-being (Mancini & Blieszner, 1989). However, this focus on the time devoted to parent–child interactions overlooks the complexity of the parent–child relationship. In fact, adult children may or may not provide an important source of social support, and in some cases they may be a source of tension or inadequate support. A study by Fingerman (1996) highlighted the complexity of the mother–daughter relationship, in which generational differences between older mothers and their middle-aged daughters fostered tension in the relationship. In another study, Fingerman (1995) found that it was important for mothers to perceive the relationship as positive even if there was underlying tension, but that daughters reported engaging in destructive and avoidant behavior more than mothers reported. Fingerman interprets the findings as implying that the perceptual biases that older mothers and adult daughters bring to conflict situations stem from the mothers' need to maintain their role as parents.

Investigations of married couples provide an example of how one person's view of a relationship can influence the other person's mental health. Tower and Kasl (1996) examined independent reports of marital closeness from both husbands and wives and their associations with depressive symptoms in a cohort of noninstitutionalized men and women aged 65 years and older. The authors found that, for husbands, their wife's response about marital closeness had a greater effect on their depressive symptoms than did their own perspective.

The concept of mattering (Rosenberg & McCullough, 1981), and, more specifically, parental mattering (Marshall & Lambert, 2006), provides a potential mechanism for the link between an adult child's reliance on his or her parent for support and positive mental health among parents. As a central component of self-concept theory, perceived mattering is defined as the psychological tendency to evaluate one's importance by whether one's actions are acknowledged and relevant in the lives of specific others (Marshall, 2001; Rosenberg & McCullough). A study by Taylor and Turner (2001) found that the general experience of mattering to others was inversely related to depressive symptomatology; further investigation showed that the experience of mattering overlapped with social support. Unlike our present study, which focuses on parent–adult child relationships, the research by Taylor and Turner did not focus on a specific dyadic relationship in their examination of mattering. A qualitative study by Marshall and Lambert assessed parents' self-descriptions

of mattering to their school-aged children. The authors found that mattering emerged from interactions with children that were linked to the fulfillment of the role of being a parent: meeting children's needs through the employment of emotional resources (e.g., comfort or emotional support) and physical resources (e.g., transportation or money).

Our theoretical conceptualization of mattering is grounded in symbolic interaction theory as applied to the parent within the context of the parent–child relationship (Marshall & Lambert, 2006). Two major contributions to symbolic interaction theory that are particularly relevant to our research are Cooley's concepts of the Looking-Glass Self (1902) and Primary Groups (e.g., immediate family; 1909). According to the Looking-Glass Self concept, an individual's self-concept is shaped by how others behave toward him or her. It is mainly through interactions with the primary group that the Looking-Glass Self emerges (Ritzer, 1996). Following from symbolic interaction theory, parents' mental health later in life may benefit by re-affirming the general integrity of their parental role as seen through the eyes of their adult child.

Our main objective in the present analysis was to determine the effect of instrumental and expressive social support, from the perspectives of both the parents and the adult child, on aging parents' depressive symptoms cross-sectionally and over time. Instrumental support defines support that is practical (e.g., providing financial assistance, helping with shopping or household chores). Expressive support is personal or emotional support (e.g., discussing important life decisions). On the basis of the theoretical foundation of symbolic interactionism and the concept of mattering, we hypothesized that an adult child's reports of receiving positive instrumental and expressive support from their parent would be associated with the parent's experiencing fewer depressive symptoms.

Methods

Participants and Procedures

The sample consisted of 304 parents aged 50 and older from the University of Southern California (USC) Longitudinal Study of Generations (Glass et al., 1986; Silverstein & Bengtson, 1991, 1994). The original eligible participants included 556 parents at baseline. The parents that we excluded from the present study did not meet the study criteria that necessitated having (a) measures of depressive symptoms in accordance with the Center for Epidemiologic Studies Depression (CES-D) scale available from baseline and at least one other follow-up time; and (b) reports provided by the parents' biological study child. In the original USC study, the investigators randomly designated one child as the "study child" (Silverstein & Bengtson, 1991). Our study focused on the individual parent–child dyads. Although the child's age was not a criterion of the study, all the children were adults, with a minimum age of 25 years.

Baseline characteristics of the sample by parents' gender are presented in Table 1. Participants and nonparticipants did not differ according to the majority of baseline characteristics, except that participants' depressive symptoms (M = 8.5, SD = 8.5) were slightly lower (p = .03) than nonparticipants' depressive symptoms (M = 10.2, SD = 9.9). Most participants were in good health, Caucasian, and married; attended at least some college; and were employed in full- or part-time work. The age of parents ranged from 50 to 72 years (M = 57, SD = 4.9). Mothers made up 58% of the sample. A larger proportion of mothers than fathers relied on their child for expressive support (p < .001). The age of children ranged from 25 to 39 years (M = 32, SD = 2.5). The majority of children were women and lived 150 or fewer miles from their parent.

The present study is a 6-year longitudinal examination of the USC data set. Although the USC study started in 1971, we used the 1985 wave as our baseline because collection of the CES-D information was initiated that year. For the present study, two follow-up time points were available for examination: 1988 (Year 3) and 1991 (Year 6). Of the 304 parents in our cohort, 26 were missing at Year 3 and 49 dropped out of the study at Year 6.

In this study, we defined parents as the study participants and we included their study child's responses as observed variables. The study households consisted of 103 mother–father households in which the mother and father shared the same study child, 1 mother–father household in which the mother and father each had a unique study child, 24 single-father households, and 72 single-mother households.

Measures

Primary independent variables: Parent–child social support—We assessed reports of both instrumental and expressive support separately from the study child's perspective and the parent's perspective, according to the combination of items suggested by Silverstein and Bengtson (1994). We examined support items at baseline and at 3- and 6-year follow-up.

Instrumental support—For instrumental support, we used responses to the question on whom respondents' relied for help or support in each of the following areas: (a) household chores; (b) transportation or shopping; or (c) financial assistance. Possible answers to select from included the following: spouse or partner, study child, other children, mother, father, sibling, other relatives, friends or neighbors, and paid helpers. Because the purpose of this study was to examine parent and child responses only, we coded dichotomous variables that defined "parent reports relying on study child" versus otherwise and "child reports relying on parent" versus otherwise.

For baseline instrumental support, 154 parents (50.7%) had a child report that he or she relied on his or her parent for support. Of these parents, the majority (85.7%) had a child report that he or she relied on his or her parent for financial assistance; the remaining parents had a child report multiple levels of reliance (chores, transportation or shopping, and financial assistance). The reverse was true for parents' reliance on their child for instrumental support. Of the 42 parents (13.8%) who relied on their study child, the majority (97.6%) reported reliance with chores and transportation whereas only 1 parent reported the child as a source of financial assistance.

We assessed the congruency between the "child reports relying on parent" measure and parents' provision of instrumental support. Of the 154 parents who had a child report that he or she relied on them for instrumental support, 59.1% reported themselves as providing such support. In contrast, of the 150 parents who had a child report that he or she did not rely on them for instrumental support, 67.3% did not report themselves as providing such support. Even though the majority is congruent (>50%), there still exist some discrepancies between the reports of adult children and those of their parents.

Expressive support—For expressive support, we used responses to the question on whom respondents' relied for help or support in each of the following areas: (a) emotional support or (b) discussing important life decisions. The possible answers and coding were the same as for instrumental support.

For baseline expressive support, 225 parents (74%) had a child report that he or she relied on the parent for support. Of these, the majority (72%) had a child report that he or she relied on the parent for both emotional support and help with important life decisions. The

distribution was similar for the parents' reliance on their children for expressive support at baseline. Of the 211 (69.4%) who relied on their study child, the majority (67.3%) reported that they relied on their child for both emotional support and help with important life decisions.

We investigated the parents' provision of expressive support in order to assess congruency between parent reports and child reports. Of the 225 parents who had a child report that he or she relied on them for expressive support, 74.2% reported themselves as providing such support. In contrast, of the 79 parents who had a child report that he or she did not rely on them for expressive support, 40.5% did not report themselves as providing expressive support. Like those in instrumental support, discrepancies in expressive support may suggest that the child's reliance of support has some distinct qualities from a parent's provision of support.

Secondary independent variable: Parental perception of child's gratitude—To further evaluate the importance of the child's perspective of support to the parent's mental health, we examined a secondary measure that assesses the parent's perception of whether the child appreciates his or her support or feels grateful. We used this baseline question: "How often do you feel that your study child is indifferent toward you or ungrateful for all that has been done for him or her?" Responses included the following: never, rarely, sometimes, fairly often, and very often. We recoded the never or rarely responses to "yes," dichotomizing the measure, and we redefined the variable "parent feels child's gratitude." The "child reports relying on parent" variable for instrumental and expressive support was significantly ($p < .05$) positively correlated with the "parent feels child's gratitude" variable. For both instrumental and expressive support, almost 80% of the parents who had a child report that he or she relied on them for support felt that their child was grateful, whereas approximately 60% of those parents whose child did not report reliance for instrumental (65%) or expressive (58%) support felt that their child was grateful.

Dependent variable: Depressive symptoms—We assessed depressive symptoms by using the CES-D scale, a 20-item instrument with acceptable levels of validity and reliability (Radloff, 1977; Radloff & Rae, 1979). The CES-D scale is a summed score frequently used in epidemiologic studies to assess depressive symptoms in older persons by self-report (Lepine & Bouchez, 1998). We summed the items if participants gave at least 17 responses. We obtained a "sum" by multiplying the mean of all nonmissing items by 20. Given that no participant had 3 missing items and a small proportion of participants had 1 (2.3%) or 2 (1.3%) missing items on the CES-D scale, any bias related to our approach for imputing CES-D scores was minimal.

In the present examination, we considered the depression score as a continuous variable ranging from 0 to 60, with a higher score indicating more depressive symptoms. We examined parents' depressive symptoms as the main outcome measure at baseline and at 3- and 6-year follow-up, and we examined study children's depressive symptoms as a covariate. In supplementary analyses, we dichotomized the dependent variable, in which one represented depressed (≥16) and zero represented not depressed (<16). The CES-D cutoff of ≥16, widely used in community studies, has good sensitivity and specificity for the clinical diagnosis of depression (Radloff & Rae, 1979; Roberts & Vernon, 1983; Teasdale, Lloyd, & Hutton, 1998).

Control variables—We chose control variables on the basis of previous research of intergenerational relationships and psychological well-being in parents (Dunham, 1995; Roberts & Bengtson, 1993; Silverstein & Bengtson, 1994). These variables included the parent's baseline age (50–72 years), income (12 levels), marital status (married vs not

married), and self-rated health (excellent or good vs fair or poor); the proximity of the study child's residence from the parent (≤150 vs > 150 miles); the parent's gender, the child's gender, and the study child's depressive symptoms (0 to 60); and the parent's working status (working vs nonworking; Glass et al., 1986). Income, an ordinal measure of household income in 1985, consisted of 12 levels ranging from less than $5,000 to greater than $50,000. In addition, we controlled for time and sibship size (total number of children in a family) in all longitudinal models.

Analysis

We conducted descriptive and bivariate analyses of the baseline data. Analyses stratified by parent's gender elucidated whether there were differences between mothers and fathers based on demographics, general health, depression, instrumental and expressive support, and characteristics of their study child. We tested the statistical significance of differences between mothers and fathers by Pearson chi-square or Fisher's Exact test for categorical variables and *t* test for continuous measures.

We used two main analyses to examine the relationship between the parent–child cross-generational factors of instrumental and expressive support and the parent's depressive symptoms: (a) a cross-sectional analysis that examined baseline CES-D scale scores; and (b) a longitudinal analysis that examined the time-varying predictors and CES-D outcome across all study years. To check model adequacy, we performed collinearity diagnostics in all multivariable models. We found parent's age to be collinear with the model intercept, and therefore we centered parent's age to correct for this collinearity. For all models, we examined residual plots to make sure that normality assumptions were not violated, and they were not.

The cross-sectional analyses at baseline determined the initial relationship of the social support variables and parental depressive symptoms. Next, the longitudinal analyses included the examination of the social support variables at all three time points (baseline, Year 3, and Year 6) by use of repeated measures models. These models examined an average association between social support and a parent's depressive symptoms over time. We did not include a baseline parental CES-D score in these models, because from our examination of such models we concluded that the effect was an overall average effect instead of support predicting a parent's CES-D score 3 or 6 years later.

We analyzed the data by using mixed-effects models with a random effect accounting for familial clustering (of parents with the same study child). In longitudinal analyses, we had an additional random effect for clustering by parent (within family), with time as a covariate for the random slope at the parent level. Supplementary analyses used a binary outcome measure of depression (CES-D score ≥16; Radloff & Rae, 1979) to explore the robustness of findings in a more clinical context (i.e., comparing the findings for a continuous measure of depressive symptoms with those of a more clinically oriented binary measure of depression). We used general linear mixed models (Verbeke & Molenberghs, 2000) to analyze the continuous CES-D outcome, and we used generalized linear mixed models (McCullagh & Nelder, 1989) to analyze the binary outcome.

Statistical tests were two-tailed tests with $p < .05$ defining statistical significance. We performed all analyses with SAS software, Version 8.2 (SAS Institute Inc., Cary, NC). For the primary examination of the continuous CES-D outcome, we used the MIXED procedure. For the supplementary examination of the binary measure, we used the GLIMMIX macro.

Results

Instrumental Support

Cross-sectional analyses of parents' depressive symptoms—Table 2 presents a cross-sectional examination of the instrumental support construct at baseline. Instrumental support was the only construct that had statistical significance. The magnitude of the instrumental support estimate shows a reduction in depressive symptoms given an adult child's reliance on his or her parent for instrumental support (B =−3.25, p < .001), after we adjusted for the secondary measure, "parent feels child's gratitude," and relevant covariates. We found the "parent feels child's gratitude" variable to be statistically significant (B = −3.16, p = .003), which further suggests that a parent's concern for the child's perception of him or her is strongly related to the parent's mental well-being.

When we added the expressive support measures to the model, the results for instrumental support remained similar, with "child reports relying on parent" the only statistically significant support factor (B = −3.34, p = .001). Because expressive support did not largely influence the results for instrumental support, the instrumental support model excluded expressive support. We also examined the instrumental support construct items individually, and the results showed that financial assistance accounted for the primary effect on parents' depressive symptoms (B = −3.04, p = .002). In addition, we investigated the provision of support by parents to determine if reporting by parents had a similar effect as reports by children. The measure of providing instrumental support to children was not statistically significant.

In the supplementary analysis for a binary outcome of parent's depression (CES-D ≥16), we found consistent results as the continuous measure. The child's reliance on his or her parent for instrumental support showed a protective effect on the parent's depression at baseline (odds ratio or OR = 0.23, 95% confidence interval or CI = 0.09–0.61). In addition, the "parent feels child's gratitude" measure also showed a protective effect on a parent's depression (OR = 0.28, 95% CI = 0.11–0.69).

Longitudinal analyses of parents' depressive symptoms—Table 3 presents the findings that an adult child's reliance on his or her parent for instrumental support is associated, on average over all time points, with significantly lower parental depressive symptoms (B = −1.15, p = .036), even after we adjusted for baseline covariates, which included follow-up time and the baseline secondary measure of "parent feels child's gratitude." As shown in the cross-sectional analysis, the longitudinal model suggests that over time the "parent feels child's gratitude" variable is significantly related to parents' lower depressive symptoms (B = −2.79, p = .002). In addition, the model suggests that over time a parent's self-rated health and the adult child's depressive symptoms might be important potential predictors of a parent's depressive symptoms (p <.05).

As in the cross-sectional analysis, when we added the expressive support measures to the model, the results for instrumental support ("child reports relying on parent") basically remained the same (B =−1.23, p = .029). When broken down by instrumental support construct items, the financial assistance measure was statistically significant (B =−1.21, p =. 035). Like the cross-sectional examination, the measure of providing instrumental support to children was not significantly associated with parents' depressive symptoms.

In a supplementary analysis for a binary outcome of depression (CES-D ≥16), the results were consistent with the continuous measure (OR = 0.36, 95% CI = 0.22–0.57). The "parent feels child's gratitude" measure was also a statistically significant protective factor (OR = 0.39, 95% CI = 0.17–0.89).

Expressive Support

Cross-sectional analyses of parents' depressive symptoms—For the cross-sectional examination of expressive support, the "child reports relying on parent" variable showed a significant decrease in parents' depressive symptoms ($B = -2.50$, $p = .034$). However, after we adjusted for relevant covariates, the association was no longer statistically significant. As with the results for instrumental support, the measure of providing expressive support to children was not significantly associated with parents' depressive symptoms.

Longitudinal analyses of parents' depressive symptoms—Neither the unadjusted nor the adjusted longitudinal results for expressive support were statistically significant.

Discussion

The present study provides evidence that the mental health of middle-aged and young-old adults may be positively affected by the behavior of their adult offspring. In other words, those parents who had adult children rely on them for instrumental support experienced fewer depressive symptoms over time ($B = -1.15$, $p = .036$), even after we adjusted for relevant covariates, such as age, gender, income, sibship size, self-rated health, proximity of child's residence, and child's depressive symptoms. The addition of the "parent feels child's gratitude" for all they do variable further substantiated the importance of the child's perspective to the parent ($B = -2.79$, $p = .002$).

The child's reliance on his or her parent for instrumental support is an important measure, in contrast to the parent's provision of the same support, which was not statistically significant. This suggests that the parent's report of self is less protective than the parent's perception of how his or her child views that parent. It is possible that some parents did not view their provision of support to adult children as something to report. Perhaps, such support was simply seen as fulfilling their role as a parent; however, if acknowledged by adult children, it may benefit parents through a sense of mattering.

Even though the direction of association cannot be confirmed by this study, our finding that financial assistance ($B = -1.21$, $p = .035$) was the primary component showing the effect further suggests that a child's reliance on the parent reduces the parent's depressive symptoms. Financial assistance is an item that requires little emotional and physical energy. Therefore, we would expect that parents with either low or high depressive symptoms could equally fulfill the financial needs of their children.

Although this study did not directly measure parents' feelings of usefulness to their adult children, a possible interpretation of these results is that the parental feeling of usefulness is a part of the process that links support to lower depression. Through implications of role dynamics and benefits of feeling useful in the context of the family, this study expands on prior research suggesting that feeling useful has functional and cognitive benefits for adults (Levy, 2003; Levy, Slade, & Kasl, 2002). It adds to the work that has found that positive aging self-perceptions predict better functioning in older individuals (Levy et al.). One of the items from the work by Levy and colleagues used to measure aging self-perceptions assesses whether individuals believe this statement: "As you get older, you are less useful." Even though such a measure was not available in our study, it seems plausible that parents in the present sample derived a feeling of usefulness from their adult children who credited them with providing instrumental support. This could occur as a simple process, in which the parent provides instrumental support that makes him or her feel useful, which in turn, lowers his or her depressive symptoms. Or, perhaps, it is a more complicated process, in which the

parent provides support, the adult child feels the parent is being useful, the child communicates this to the parent, and then the parent feels useful.

By examining the child's acknowledgment of his or her parent's support, we argue that the present study considers the experience of mattering. The recognition that a significant other person depends on one is a powerful reinforcement of mattering (Pearlin & LeBlanc, 2001; Rosenberg & McCullough, 1981). Pearlin and LeBlanc found that, even among caregivers, the death of a demented spouse or parent led to a loss of mattering and depression, where greater loss of mattering predicted higher depression severity 1 year later. Despite the burden of care-giving, the authors concluded that the loss of something as critical as the sense of mattering could leave a person in a state of emotional turmoil.

Even though there are limited empirical studies to compare these findings, there is theoretical evidence. Birch (1997) defined the parent's experience of attachment as one in which the parent feels a strong sense of responsibility for meeting the child's needs, and the parent feels anxiety and stress when those needs do not appear to be met. Bengtson theorized that the parent has more personal investment (or "intergenerational stake") in his or her child than the child has in the parent (Bengtson, 1996; Bengtson, Cutler, Mangen, & Marshall, 1985; Dunham & Bengtson, 1986), suggesting that parents may be at risk of affective consequences related to the child's perceptions of need. Our study provides evidence for the concept of developmental stake through an examination of a parent's perception of his or her child's gratitude. This variable emphasizes that it is how parents interpret their child's view of them and their usefulness that matters to their depressive symptoms more than the parents' unilateral reporting of support.

Our study suggests that in middle-aged and young-old adults the child's instrumental reliance on their parent may be more important than their emotional reliance on their parent, at least in contributing to the mental health of the parent. Further, parental mattering (Marshall & Lambert, 2006) would suggest that middle-aged and young-old parents who fulfill the role of instrumental provider to their adult children might feel a strong sense of purpose through pragmatic actions of support, as they provide for needs (i.e., fulfilling a societal expectation) that are now a part of their child's adult life. In contrast, providing emotional support might be more closely associated with a sense of mattering for parents of younger children.

There are three main limitations to this investigation. First, the homogeneous study group, which consists mostly of White, middle- and working-class families, may not broadly represent the actual complexity that many families experience. Second, we cannot confidently exclude the alternative interpretation of results that children relied on parents more if parents were not depressed. Third, parental reports of parent–child relationship measures were based on a single study child selected at random, instead of all children who participated in the study. Fortunately, however, we were able to adjust for child's gender, child's proximity of residence to parent, total number of children, and child's depressive symptoms in all multivariable analyses. In addition, Silverstein and Bengtson (1991) found a high consistency within each parent's set of reports on multiple children in the 1988 survey.

Despite these limitations, the present study has some important strengths. It investigates symptoms that are precursors to major depression, which is often underestimated in adult populations (Blazer, 2003; Girling et al., 1995; Klerman & Weissman, 1989; Lepine & Bouchez, 1998). Furthermore, little attention has been paid to the influence of the parent–adult child relationship on the well-being of midlife and older parents; most research has focused on adult children (e.g., Matheson et al., 2005). In addition, no study that we know of has examined parent–adult child psychosocial predictors of a parent's depressive symptoms

from the actual perspective of the child. Our study has shown the significance of taking the adult child's reports into account when one is analyzing a parent's depressive symptoms.

Our findings suggest several future directions for research, including studies to confirm the results of our investigation. A study designed with shorter time intervals and more follow-up measures would allow for a comprehensive analysis of the data through a lag model, in which the instrumental support variable is lagged before the change in CES-D score (e.g., 1 month prior).

To expand on this study, future studies should investigate other areas of instrumental support, other members' perceptions of support (e.g., grandparents and grandchildren), and the quality of the relationship as a potential effect modifier, as well as other personality characteristics and ethnic groups. Further, the study of a population older than this one would be desirable, so the transition of roles (e.g., losing the practical fulfillment of the parental role through the parent's increased disability and increased reliance on his or her child and others) and its effect on parents' depression can be more thoroughly investigated.

This present study suggests the importance of relationships and support constructs in examining risk factors for depressive symptoms and depression in middle-aged and young-old adults. It is evident from this study that the adult child's perspective of instrumental support is associated with a parent's depressive symptoms. Perhaps, the reemphasis of a fulfilling and meaningful pragmatic role for midlife parents in relation to their children could help prevent or reduce depression.

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Table 1

Baseline Characteristics for Parents

	Mother			Father			
Characteristic	***M***	***SD***	**%**	***M***	***SD***	**%**	***p***
Demographics							
Age (years)	56.4	4.4		58.5	4.5		<.001
Household income[a]	9.9	2.5		10.3	2.1		.139
Total number of children	3.5	1.5		3.5	1.5		.693
Race (White)			96.6			97.7	.738
Education (≥some college[b])			62.5			81.9	<.001
Married			83.5			96.1	<.001
Working[c]			55.1			71.1	.005
General health							
Self-rated health (excellent or good)			88.0			86.7	.739
Any chronic condition[d]			44.3			36.7	.184
Depressive symptoms[e]	8.9	8.5		7.8	8.4		.277
Instrumental support							
Parent reports relying on study child			11.9			16.4	.264
Child reports relying on parent			48.9			53.1	.463
Expressive support							
Parent reports relying on study child			80.1			54.7	<.001
Child reports relying on parent			75.6			71.9	.469
Parent feels child's gratitude			73.2			70.2	.580
SC characteristics[f]							
SC age (years)	32.5	2.5		32.4	2.4		.623
SC depressive symptoms[e]	10.9	8.9		10.5	8.6		.721
SC female			58.5			56.3	.692
Living ≤150 miles from parent			63.4			64.3	.871

Notes: Parents, $N = 304$; mothers, $n = 176$; fathers, $n = 128$. SC = study child. The statistical significance of differences between mothers and fathers was tested by Pearson chi-square or Fisher's Exact test for categorical variables and *t* test for continuous measures.

[a] Household income, in dollars (1985): 1 = <5,000; 2 = 5,000–7,499; 3 = 7,500–9,999; 4 = 10,000–12,499; 5 = 12,500–14,999; 6 = 15,000–17,499; 7 = 17,500–19,999; 8 = 20,000–24,999; 9 = 25,000–29,999; 10 = 30,000–39,999; 11 = 40,000–49,999; 12 = >50,000.

[b] Includes specialized technical, business, or other training after high school.

[c] Employed (full or part time), including temporarily laid-off and self-employed workers.

[d] Chronic conditions such as diabetes, heart trouble, arthritis, or cancer.

[e] Center for Epidemiologic Studies Depression scale score, ranging from 0 to 60.

[f] There were 201 unique study children: there were 103 mother–father households in which the mother and father shared same study child; 1 mother–father household in which the mother and father each had a unique study child; and 96 households with 1 study parent (24 single-father households and 72 single-mother households).

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Table 2

Cross-Sectional Model at Baseline of Instrumental Support Construct and the Outcome (Parents' Depressive Symptoms)

Variable	*B*	SE_B	*t*	*p*
Instrumental support				
Child reports relying on parent	−3.25	0.95	−3.41	<.001
Parent reports relying on study child	2.03	1.39	1.46	.145
Parent feels child's gratitude	−3.16	1.06	−2.98	.003
Covariates				
Gender (female)	0.87	1.02	0.85	.396
Age[a]	−0.11	0.12	−0.92	.359
Household income[b]	−0.41	0.23	−1.82	.070
Married	−0.84	1.68	−0.50	.617
Total number of children[c]	−0.48	0.33	−1.47	.143
Self-rated health[d]	−2.83	1.45	−1.96	.052
Working[e]	0.71	1.07	0.66	.508
SC gender (female)	0.85	0.96	0.89	.376
SC living distance from parent[f]	0.22	1.00	0.23	.822
SC depressive symptoms[g]	0.09	0.05	1.62	.106

Notes: The model was based on mixed-effects linear regression analysis, including a random effect for family; model −2 log likelihood = 1834.5; SC = study child.

[a] Age was centered as a result of collinearity with the intercept determined by a condition index of >30 and small eigenvalue (near 0) with maximum variance proportions (i.e., loadings) for age and the intercept.

[b] Household income (1985): 1 = <5,000; 2 = 5,000–7,499; 3 = 7,500–9,999; 4 = 10,000–12,499; 5 = 12,500–14,999; 6 = 15,000–17,499; 7 = 17,500–19,999; 8 = 20,000–24,999; 9 = 25,000–29,999; 10 = 30,000–39,999; 11= 40,000–49,999; 12 = >50,000.

[c] Total number of children: range = 1–10.

[d] Self-rated health: excellent or good versus fair or poor.

[e] Working (employed full or part time, including temporarily laid-off and self-employed workers) versus not working.

[f] Living distance from parent: ≤150 versus >150 miles.

[g] Center for Epidemiologic Studies Depression scale score, ranging from 0 to 60.

Table 3

Longitudinal Model of Time-Dependent Instrumental Support Construct and the Outcome (Parents' Depressive Symptoms)

Variable	*B*	SE_B	*t*	*p*
Instrumental support				
Child reports relying on parent	−1.15	0.55	−2.10	.036
Parent reports relying on study child	0.75	0.75	1.00	.319
Parent feels child's gratitude	−2.79	0.88	−3.16	.002
Covariates				
Gender (female)	0.66	0.80	0.82	.412
Age[a]	−0.07	0.10	−0.72	.473
Household income[b]	−0.28	0.19	−1.48	.140
Married	−0.72	1.40	−0.51	.610
Total number of children[c]	−0.51	0.28	−1.83	.068
Self-rated health[d]	−4.10	1.21	−3.39	<.001
Working[e]	0.91	0.88	1.03	.305
SC gender (female)	0.25	0.84	0.30	.765
SC living distance from parent[f]	−0.52	0.85	−0.61	.543
SC depressive symptoms[g]	0.11	0.05	2.42	.017
Time (per 3 years)	0.02	0.26	0.08	.937

Notes: The model was based on linear regression for repeated measures analysis of longitudinal data, using a compound symmetry covariance structure; model −2 log likelihood = 4984.0. SC = study child.

[a]Age was centered as a result of collinearity with the intercept in cross-sectional analyses determined by a condition index of >30 and small eigenvalue (near 0) with maximum variance proportions (i.e., loadings) for age and the intercept.

[b]Household income (1985): 1 = <5,000; 2 = 5,000–7,499; 3 = 7,500–9,999; 4 = 10,000–12,499; 5 = 12,500–14,999; 6 = 15,000–17,499; 7 = 17,500–19,999; 8 = 20,000–24,999; 9 = 25,000–29,999; 10 = 30,000–39,999; 11= 40,000–49,999; 12 = >50,000.

[c]Total number of children: range = 1–10.

[d]Self-rated health: excellent or good versus fair or poor.

[e]Working (employed full or part time, including temporarily laid-off and self-employed workers) versus not working.

[f]Living distance from parent: ≤150 versus >150 miles.

[g]Center for Epidemiologic Studies Depression scale score, ranging from 0 to 60.