

## Sources of Stressor-Specific Negative Transactions and Depressive Symptoms Among White and African American Older Women

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*The effects of negative social relationships on mental health are receiving increased attention in the gerontological literature. This study examines a new stressor-specific approach to assessing negative transactions. In-person interviews with an urban, community-based sample of 221 older White and African American women and their significant others were used to develop a measure of interpersonal transactions related to 4 stress domains: personal health problems, other's health problems, interpersonal difficulties, and losses. A total of 5 scales were derived: Optimistic/Caring, Self-reliance, Criticism/Conflict, Hindrance, and Letdowns. Optimistic/Caring and Hindrance transactions were commonly reported for personal health problems, whereas interpersonal difficulties were associated with Criticism/Conflict and Letdowns. Family members were most commonly a source of negative transactions. Compared to Whites, African Americans reported more providers and were found to receive fewer transactions from immediate family members. Stressor-specific transaction measures did not add to the prediction of depressive symptoms beyond that provided by global positive and negative perceived relationship measures, but they did provide useful insights into the reactions of network members to the lives of older adults.*

There is now a substantial literature demonstrating the importance of negative social relationships to psychological well-being, distress, and physical health, especially among older adults (Finch & Zautra, 1992; Fiore, Becker, & Coppel, 1983; Ingersoll-Dayton, Morgan, & Antonucci, 1997; Kaplan, Roberts, Camacho, & Coyne, 1987; Krause, 1995; Manne & Zautra, 1989; Pagel, Erdly, & Becker, 1987; Rook, 1984; Ruehlmann & Wolchik, 1988). However, a difficulty with much of this research is that the mechanisms by which negative interactions influence mental health are still largely unknown because most measures of negative transactions are very global. In this study, we describe the development of a stressor-specific measure of positive and nega-

tive transactions and examine the utility of stressor-specific compared to global approaches to assessing negative interactions in older adults. In particular we examine the extent to which negative transactions experienced by older adult women vary by type of stressor, type of provider, and race.

Much as the initial literature on social support was characterized by broad, undifferentiated concepts and measures (Heller & Swindle, 1983), the literature on negative transactions also lacks specificity and clarity. The most common approach to assessing the presence of negative transactions involves asking the respondent to identify the number of people who have provided potentially aversive interactions. Examples are: the number of people who criticized, broke promises, or provoked anger (Finch & Zautra, 1992); the frequency with which others were too demanding, critical, prying, or took advantage (Krause, 1995); or the frequency with which others were sources of other negative interactions (Brenner, Norvell, & Limacher, 1989; Ingersoll-Dayton et al., 1997; Vinokur & van

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Ryn, 1993). These measures are not tied to specific stressors and have in common a conceptualization of negative transactions as a generalized perception—basically the converse of what is commonly called “perceived support.” Measures of perceived support are useful in predicting mental health outcomes. Indeed, there are a number of studies that demonstrate the relative independence of the two constructs. Global reports of negative transactions are strongly tied to higher levels of depression and negative affect, with perceived support tied to positive well-being (Finch, Okun, Barrera, Zautra, & Reich, 1989; Ingersoll-Dayton et al., 1997; Lakey, Tardiff, & Drew, 1994; Pagel, Erdly, & Becker, 1987). However, what is missing is an understanding of the sources of negative interpersonal perceptions. Do social perceptions represent appraisals of current social events (Heller, Swindle, & Dusenbury, 1986), or are they formed earlier in life, representing stable, global judgments of others that are relatively immune to change by current interpersonal transactions (Lakey & Drew, 1997). Before this question can be answered, better methods need to be developed to assess ongoing transactions and their impact.

There have been a number of hypotheses about what aspects of negative transactions are most potent, with expressed emotion and criticism cited most often (Butzlaff & Hooley, 1998; Hooley, 1987; Manne & Zautra, 1989). However, negative interactions involving hindrance or interference (Ruehlman & Wolchik, 1988) and subtle forms of social undermining and feelings of being let down (Vinokur & van Ryn, 1993) may be more troubling to older adults. Included in more subtle forms of undermining are provisions intended to be helpful, which inadvertently have the opposite effect (Wortman & Lehman, 1985). Zautra (1996) also made an intriguing distinction between encouraging self-reliant coping and other-reliant coping. He found that under some circumstances, encouraging self-reliance can have unintended undermining effects. In his research, older adults who were losing physical functioning over time rated their mental health as lower if they received encouragement from others to become more self-reliant, compared to a group of equally sick older adults who were encouraged to lean on others. Encouraging older adults to be more self-reliant improved mood only for healthy older adults.

In this study, we compare stressor-specific measures of positive and negative social transactions with more global measures of positive and negative support. Our goal is to document when, and with whom, positive and negative social transactions occur. Significant theory and research from the social support literature suggest the value of a more stressor-specific measurement approach to complement current global approaches. Several theorists have argued for the importance of matching support provisions with the particular characteristics of stressors, if support is to be

successful (Cohen & Wills; 1985; Cutrona & Russell, 1990). In particular, Thoits (1986) conceptualized social support as coping assistance. From this perspective, one would expect that support provisions should vary depending on the nature of the situation. Elsewhere we have argued that there is a strong case to be made for a more situated, life domain-specific approach to social transactions, coping, and personality (Swindle, Heller, & Lakey, 1988; Swindle & Moos, 1992). It is reasonable to inquire whether some kinds of negative transactions are more likely in the context of one kind of stressor than others. Thus, for example, Wortman and Lehman (1985) demonstrated that people are prone to say the wrong things for losses. Similarly, in responding to a significant other’s health problem, caregivers may feel overburdened and can undermine by being overly protective (Coyne, Ellard, & Smith, 1990). In this study, we contribute to the study of negative transactions and hypothesize that negative transactions will vary by type of stressor.

Our research is guided by an emphasis on the importance of understanding how coping with ongoing stressors influences health and mental health outcomes (Moos & Swindle, 1990). Our development of stressor-specific scales derives from coping research in which interpersonal transactions are recognized as important dimensions of the coping and adaptation process. We focus on four stressor domains because they appear to be particularly important in the lives of older adults: Own health problems (Dew, 1998; Swindle, Cronkite, & Moos, 1989), other’s health problems (Coyne et al., 1990; Revenson & Majerovitz, 1991; Thompson, Bundek, & Sobolew-Shubin, 1990), interpersonal difficulties (Butzlaff & Hooley, 1998; Hooley, 1987; Manne & Zautra, 1989; Ruehlman & Wolchik, 1988; Vinokur & van Ryn, 1993), and losses (Brown, 1998; Lane & Hobfoll, 1992; McLeod, 1991; Phifer & Murrell, 1986).

Relatively unexamined in the literature is the role of specific providers as sources of negative transactions. In a previous study, we found that the absence of family support was more strongly linked to depression compared with friend support and that family provisions were not readily exchangeable with friend provisions (Heller et al., 1991; Thompson & Heller, 1990). There is suggestive evidence that spouses and immediate family (adult children) of older adults tend to more often be sources of negative transactions, rather than extended family, friends, or other network members (Rook, 1990). Indeed, the companionship of friends has been found to generate positive affect among older adults (Larson, Mannell, & Zuzanek, 1986). There is additional evidence from studies with younger populations supporting our hypothesis that negative transactions vary by source (Dakof & Taylor, 1990; Schuster, Kessler, & Aseltine, 1990; Swindle, Heller, & Frank, 2000).

Finally, a stressor- and provider-specific measure of network provisions may contribute to the literature

concerning differences in the structure and function of social ties among older African Americans and Whites. Early ethnographic research emphasized the network interconnectedness of African American community life (Liebow, 1967; Stack, 1974). This interdependence was said to be adaptive in that it allowed African American families to exchange social and financial resources with members of extended networks as a method of coping with poverty. Recent research has emphasized the diversity of the African American experience, particularly as it is influenced by education, income, and patterns of geographic migration (Jackson, Chatters, & Taylor, 1993).

There is some research to indicate that there are no clear differences in the quantity and quality of support received by older African Americans compared with older Whites (Lubben & Becerra, 1987; Silverstein & Waite, 1993; Ulbrich & Bradsher, 1993). However, racial differences have been found in network composition. In some studies, older African Americans have been found to have fewer living children, because although African Americans have a higher birth rate, the mortality rate for younger African Americans is higher than it is for Whites (Manton, 1992). Thus, older African Americans are likely to have fewer children on whom they can count for support, relying instead on extended network members (e.g., friends and siblings; Lubben & Becerra, 1987). We examine racial differences in network transactions for type of stressor, types of provisions reported, and the sources of provisions.

In this study, we also examine the value of global and specific measures in predicting older adult depressive symptoms. Depression among older adults has been described as a major public health problem. Although older adults appear to be psychologically resilient to the changes and stressors associated with late life, a substantial minority develops depressive disorders—many for the first time in their lives. There are estimates that approximately 3% to 5% of older adults suffer from major clinical depression, and an additional 12% to 15% suffer from significant levels of depressive symptoms (Blazer, 1982; Gatz, Kasl-Godley, & Karel, 1996). Although many network researchers study depressed mood as their dependent variable, this is not the same as clinical depression or significant depressive symptomatology. On the other hand, psychiatric studies of older adult depression focus on patient samples (Post, 1986), yet patient groups are likely to be unrepresentative of the general population of depressed older adults whose depression is frequently unrecognized and untreated (Blazer, 1982; Thompson & Heller, 1993). What is needed are studies that cover the full range of depressive impairment in noninstitutionalized, community dwelling older adults.

In summary, this study examines several interrelated topics. The primary goal is to report on a measure of stressor-specific positive and negative network transactions that can be used with community-dwell-

ing White and African American older women, including those with significant depressive symptomatology. In doing so, we provide descriptive data about the frequency of four classes of life events that these women experience: own health problems, others' health problems, social losses, and interpersonal difficulties. We assess the extent to which negative transactions vary by stressor and provider as hypothesized and also provide information about racial differences in these variables. Finally, we examine the relative contribution of stressor-specific transactions and global measures to depressive symptoms.

## Method

### Sample

Participants consisted of 221 older women selected in a stratified sample from census districts that were at or below the median in apartment value in a large Midwestern city. After telephone solicitation and a mailing describing the study, participants were screened for depression in a brief telephone interview. Women with higher depression screening scores were deliberately oversampled to obtain an adequate sample of depressed older women. Furthermore, whereas 16% of the city's population was African American, we purposely oversampled from this racial group so that in the final sample, 38% were African American older women.

### Procedure

The sample was obtained as follows: Household phone numbers in low-income census tracts were called during the day, when older adults were likely to be at home. To achieve the desired racial composition, census districts were called that were either 65% White or 65% African American, with some additional calling from mixed racial districts. In total, 36,551 numbers were dialed, including callbacks, but as expected, the majority of calls did not result in finding a person at home. There were 10,342 persons who answered the phone, and of these, 3,697 (35%) were 65 years of age and older. Of this number, 2,986 (81%) were women. When an older woman was found, the study was briefly described as one concerned with social ties and health and the woman was asked if she would be willing to receive project literature. If she agreed, project literature was sent and a telephone-screening interview was arranged within a week. Sixty-six percent of the women contacted, or 1,963 women, were willing to receive project literature and completed the screening interview.

The 10- to 15-min telephone-screening interview consisted of questions covering demographic, health, and social activity information. A 10-item version of

the Center for Epidemiological Studies–Depression Scale (CES–D; Andresen, Malmgren, Carter, & Patrick, 1994) was administered, which was modified for phone use by decreasing the response alternatives from four to two. Respondents who scored two or higher on the screening version of the CES–D (Callahan & Wolinsky, 1994) were asked to participate further in more lengthy home interviews. Of the 1,963 women who were screened, 758 (39%) scored above this threshold and qualified to be approached for in-home interviews. Of these 758 women, 481 provided informed consent to participate in the study and achieved a minimum Folstein Mini-Mental Status Score of 21. A total of 221 women were selected to complete the first 4 hours of interview. The 221 represent a sample stratified for levels of depressive symptoms. All women meeting Structured Clinical Interview for DSM–IV (SCID; First, Spitzer, Gibbon, & Williams, 1995) criteria for a depressive spectrum disorder were included in the sample, as were all women with CES–D scores above 13 who did not meet SCID criteria. Women with lesser levels of depressive symptoms or admitting to no depressive symptoms were sampled. The sample therefore contains: 66 women meeting SCID criteria for major depressive disorder, minor depressive disorder, dysthymia, mixed anxiety-depression, or partially remitted major depression; 45 women with CES–D scores above 13 who did not meet SCID criteria for a depressive disorder; 46 women with CES–D scores between 1 and 13 without SCID depressive disorders; and 64 women without depressive disorders and CES–D scores of 0. Most of the 481 consenting respondents not included in this report were intentionally not followed up for a second interview because they had CES–D scores of 13 or below. Participants were paid for in-home interviews. Data in this report are based on stressor data from the first 221 women enrolled in the study for which completely coded data from the first 4 hr of interview is available (of a final total of 245 women).

There were two in-home interviews, each of which lasted approximately 2 hr. Same-race interviewers did all of the initial screening and in-home interviewing. The first interview covered: further demographic information; a mental status exam to rule out all respondents with cognitive impairment; depression and screening modules of the SCID diagnostic interview; health status; functional ability (Activities of Daily Living); pain; health locus of control; medication; medical and psychiatric treatment; the full scale CES–D; and questions concerning network size, composition, frequency of contact, and closeness to network members.

The second interview, administered 7 to 10 days later for the reduced sample of those initially interviewed, covered: attitudes toward aging, two stressors that occurred within the last year, coping with those

stressors, the transactions that network members provided in response to those stressors, and supportive provisions made by the respondent to significant others. At the end of the second interview, respondents were asked to nominate up to five network members, two of whom would be contacted to further discuss the respondent's health and social activities. Up to two network members were then questioned about their stressor-related transactions with the older adult respondent. Older adult respondents also were followed up at 6-month and 1-year intervals. Data for this article are from the first and second interviews only.

## Measures

**Demographics.** Demographics included age in years, years of education, race, marital status, number of children, and number of children who have died.

**Health.** Health was measured using participants' response to the question: "In general would you say your health is: Excellent, very good, good, fair, or poor?"

**Depressive symptoms.** The 20-item Center for Epidemiological Studies Depression Scale (CES–D; Radloff, 1977) and the 10-item brief version of the CES–D were administered (Andresen et al., 1994). Symptoms in the last week are assessed with items such as: "How often did you feel you could not shake off the blues even with help from your family and friends?"

**Network enumeration.** At the end of the first interview, social network measures were assessed by asking: "Would you give me the first names of people you have seen or had contact with in the last month?" This was followed by the question: "Are there any other family members or friends you are likely to see on a fairly regular basis?" For each person mentioned, the participant was asked about the person's gender, age, and relationship; usual frequency of face-to-face contact; usual frequency of telephone contact; and their rating of closeness to that person. From this procedure were derived measures of *network size* (the total number of persons listed), *immediate family ratio* (ratio of spouse and children to total network size), *friend ratio* (ratio of friends to total network size), *average face-to-face contact with network members* (average across all nominees on a 6-point frequency scale ranging from 6, *daily*, to 1, *less than once a month*), *average frequency of telephone contact with network members* (overall network average on same 6-point scale as for face-to-face contact), and *average network closeness* (overall network

average of 6-point scale rating for each person listed ranging from 6, *extremely close*, to 1, *not at all close*).

**Stressor solicitation.** Participants were told: "I'd like to ask you some questions about things that happened in your life during the past year. There may have been some good things that happened this year and we'll get to those shortly, but I'd like to start with events or experiences that you found stressful. What would you say was the most stressful experience that you've had this past year? What happened? What in particular did you find most stressful about this experience? When did it occur? How long did it last? Is the problem ongoing?" This open-ended procedure was adapted from Moos, Cronkite, Billings, and Finney (1988) and reflects the finding in the life events literature that the most significant stressors in individual's lives are often missed with life events lists (Dohrenwend, 1976). If a respondent failed to report a stressor, she was provided the Moos et al. (1988) Life Events List to review in order to cue memory of recent life event or ongoing stressors.

**Stressor classification.** Stressors were classified as a Self-Health stressor (HS), an Other Health (HO) stressor (a health problem of another person), an Interpersonal Difficulty (I), a Loss (L), or an Other (O) event. The classification scheme is available from Ralph W. Swindle, Jr., on request.

**Stressfulness.** After a stressor was selected, each participant was then asked: "On a scale of 1 to 10, where 10 is the most stressful thing that has ever happened to you in your whole life and 1 is hardly stressful at all, how stressful would you say this event was?"

**Stressor-specific transactions.** An item pool of 26 items for possible transactions was constructed after a review of existing measures to reflect distinctions made in the coping and support literature (Cutrona & Russell, 1987; Heller & Rook, 1997; Moos & Schaefer, 1993; Thoits, 1985, 1986). Six "positive" transaction constructs were reflected in the items: problem focused assistance, encourages independence and self-control, emotional support, esteem enhancement, positive reappraisal, and encourages religious coping. The choice of items for the negative transaction scales was more problematic because distinctions between types of negative interactions are rarely made in the literature. Exceptions, however, can be found in the work of Finch et al. (1989), Vinokur and van Ryn (1993), and Zautra (1996). Based on this prior work, we developed items

for five "negative" transaction constructs: Encourages avoidance, discourages independence, withheld support/disappointment, esteem denigration, and criticism/conflict. A set of parallel items was constructed for network members to report on transactions involving the respondent for the most important stressor as perceived by the network member.

For each stressor the participant was told, "I have a list of things older adults told us family members or friends have said to them or done while they were going through difficulties or having problems. I'm going to show you the list and I'd like to know whether any of these actions are similar to the ways your family or friends acted while you were dealing with (STRESSOR) this past year. Some of these things may not have happened or apply to your experience, but please tell me about any of the items that do apply." An example of how transactions were elicited is: "When you were dealing with (STRESSOR) ... did anyone, such as a family member, friend, or professional, give you advice or share an experience that helped you deal with this problem? If Yes, who was this, and did they do it: once or twice, sometimes, or fairly often."

Up to two providers of specific positive transactions were recorded by relationship and frequency. However, because they occurred more rarely, all providers of negative transactions were counted. An example of a negative transaction probe was: "Did anyone try to control what you were doing?"

**Provider relationship.** The relationship to the respondent was recorded with the same unique identifier used in the network measure (i.e., Son 1, Son 2, etc.), then categorized as spouse, child, extended family, friends, and others. Provisions from up to 10 providers per stressor were recorded.

**Global negative perceived network.** This 0- to 9-point measure based on Finch et al. (1989) was the sum of names nominated in response to three questions asked after the first event network provisions were assessed. Participants were asked to provide up to three names of network members for each question:

1. Looking back over your contacts during the past year, has anyone been critical of you or have you had a disagreement or misunderstanding or an argument with anyone? Including anyone you usually get along with? (Names are from the network list.)
2. How about other people who are not on this list—has anyone been critical of you or have you had a disagreement, misunderstanding, or argument with anyone else during this past year?
3. Most people have had an experience where a family member or friend has disappointed them or let

them down in some way. Looking back over your life during this past year, has anyone done anything that let you down or disappointed you?

**Second stressor solicitation.** A second stressor was elicited by a slightly different procedure. If the first stressor reported was an interpersonal difficulty, disappointment, or conflict, the next most important stressor to the respondent of any type was accepted as long as it was not another interpersonal event. The participant was then asked the three (global negative) questions concerning whether they had experienced any disappointments, letdowns, or conflicts in relationships in the last year and identified up to three different people with whom they had experienced these interpersonal stressors. If they had no interpersonal stressors, they were then asked about any personal losses. If they had no losses, they were then asked about health problems. If they or their significant others had no health problems, the stressful life events list (Moos et al., 1988) was read to them to elicit a second event of any type. Once a second event was identified, the procedure used as in the first stressor was repeated to obtain a stressfulness rating and transaction data.

## Analysis

Stressor-specific transaction scales were constructed based on exploratory maximum likelihood factor analysis and Cronbach's alpha reliability analysis. Confirmatory factor analysis was not used because the items had not been used previously, and there was no basis to know if the 11 initial transaction dimensions would yield discrete transaction types. Initial scales developed for the older adult respondent sample were then cross-validated with parallel items from the two network members interviewed for each respondent. Pearson correlations are reported between variables. Hypotheses were tested using multivariate analysis of variance (MANOVA) to provide appropriate generalized linear model multivariate tests to control for correlated and Type-II error rates. Univariate analyses of variance (ANOVAs) and *t* tests were interpreted when the MANOVA was significant. Between-group univariate differences were tested with Tamhane post hoc tests as appropriate to the hypothesis being tested because lack of homogeneity of variances precluded more powerful multicomparison tests that assume homogeneity. Analyses and degrees of freedom were at the respondent and stressor level of analyses as indicated by the research question and identified by the sample size reported in the text and tables. Analyses are at the subject level of analyses except where indicated otherwise (such as for stressors  $N = 348$ ). Predictions of depressive symptoms used multiple and

logistic regression. SPSS Windows Version 4.5 was used for all analyses.

## Results

First we describe sample characteristics with regard to demographics, social network characteristics, and stressors for the entire sample and for the White and African American subsamples. Then we describe the development of the stressor-specific transaction scales and address the extent to which stressor-specific transactions vary by event type, provider, and race. Finally, we examine the role of global and stressor-specific transactions in the prediction of depression.

### Descriptive Characteristics

Demographics of the sample are provided in Table 1. The average age of the women was 74 years, with an average education of 11.6 years of schooling. Thirty-eight percent of the participants were African American. Almost half of the participants were widowed (48%), with 29% married and 14% divorced or separated. The mean CES-D score in this sample was 12.3, with 32% equal to or higher than a score of 16. This high depressive symptom rate is due to deliberate oversampling of depressed women. Many women had health problems: only 23% described their health as excellent or very good, 34% as good, and 42% as fair or poor.

The 221 study participants were compared on demographic and health variables with the remaining 1,742 participants who completed a telephone-screening interview but are not included in this study sample. As expected, given our goal of studying the interpersonal relationships of women with depressive symptoms, the participants in this sample differed from the full sample in that they had a greater number of depressive symptoms on the short-form CES-D and worse self-rated health. They were equivalent to the full screening sample in terms of age, education, race, number of children, number of children lost, and availability of a confidante.

**Social network characteristics.** As can be seen in Table 1, the women were able to identify an average of five people who constituted the social network with whom they talked to on a fairly regular basis: Only six women (3%) could name no one. On average, they interacted with each person on the list about every 10 days and talked with each on the phone once a week. About a third of the people listed were immediate family members (spouse and children), a third were other family members, and a third were friends and others. On average, participants described themselves as pretty

**Table 1.** Sample Descriptive Characteristics

Variable	<i>M</i>	<i>SD</i>	<i>N</i>	White <sup>a</sup>		African American <sup>b</sup>		<i>t</i>
				<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Age	74.3	8.8	221	74.2	9.9	74.5	6.7	.2
Education (Years)	11.7	2.7	182	11.9	2.5	11.3	2.8	1.6
CES–D	12.3	10.0	214	13.2	10.0	10.9	9.9	1.7
Current Health	3.3	1.1	215	3.3	1.1	3.3	1.0	.3
Network Size	5.4	3.0	217	5.7	3.3	5.0	2.4	1.7
Face-to-Face Frequency	3.4	1.0	207	3.3	1.0	3.5	1.1	1.9
Phone Contact Frequency	4.1	1.1	207	3.7	1.1	4.7	.9	6.8**
Network Closeness	4.7	.8	131	4.7	.9	4.8	.6	1.1
Number of Children Alive	3.4	7.0	217	2.7	2.2	2.7	2.6	.0
Number Children Died	.3	.5	214	.2	.4	.4	.7	2.2*
Immediate Family Ratio	.4	.3	217	.4	.3	.3	.3	1.0
Friend Ratio	.3	.3	217	.3	.3	.4	.3	2.2*
Global Negative Perceptions	.8	1.2	205	.9	1.2	.7	1.2	.9

Note: CES–D = Center for Epidemiological Studies–Depression Scale. Multivariate Analysis of Variance (Race) Pillais'  $V = .27$ ,  $F(13, 87) = 2.4$ ,  $p < .007$ .

<sup>a</sup> $N = 136$ . <sup>b</sup> $N = 85$ .

\* $p < .05$ . \*\* $p < .001$ .

close or very close to all the people listed. Fifty-seven percent had no one they could remember having had conflicts or disagreements with in the last year.

Racial differences in social network composition were found, MANOVA (Race) Pillais'  $V = .27$ ,  $F(13, 87) = 2.4$ ,  $p < .007$ , in that the networks of African American women were of equal size to those of the White women, but their networks had a higher proportion of friends. African American women talked with members of their network on the telephone more frequently than did White women. They also were more likely to have experienced the death of one of their children.

**Recent stressors.** The most stressful experience in the last year was most often a personal health problem (34%), followed by the health problem of someone else (19%), a personal loss (18%), an interpersonal conflict (14%), and an other stressor (14%). The second stressor for those who reported one (82% of the sample had a second stressor to report) was also most likely to be a health problem (42%), despite the initial probing for an interpersonal difficulty. Less frequently reported were: an interpersonal difficulty (35%), a loss (12%), another stressor (8%), and a health problem of someone else (2%). Overall there were 149 respondent health problems reported, 93 interpersonal difficulties, 60 losses, 45 other person's health problems, and 45 other stressors. There was no relation of stressor type to level of depressive symptoms (CES–D). There also were no significant differences in stressfulness ratings across the stressor groups. Racial differences in events were found in that African American women were more likely to report losses within the last year and were less likely to report interpersonal difficulties,  $F(3, 343) = 3.6$ ,  $p < .02$  (Tamhane loss vs. interpersonal  $p < .02$ ).

Most participants (88%) reported some transactions related to the stressors they experienced. On average, 4.31 ( $SD = 2.45$ ) providers were involved in each stressor. Of identified providers, transactions occurred most often with children (26% of all transactions), followed by friends (23%), other family members (19%), and spouses (4%). Compared to Whites, African American women were likely to interact with more providers for each stressor,  $M = 5.1$  versus 4.1 providers;  $t(214.6) = 3.5$ ,  $p < .001$ . Their stressor-related interactions were also more likely to be with extended family,  $t(178) = 2.7$ ,  $p < .01$ ; friends,  $t(192.5) = 3.5$ ,  $p < .001$ ; and other people,  $t(225) = 2.1$ ,  $p < .04$ .

### Stressor-Specific Transactions: Scale Construction

Item inspection revealed that most participants reported few negative transactions (with 57% of respondents reporting no negative transactions with anyone related to the stressors). Therefore, to develop negative transaction scales, scale construction initially began at the network level of aggregation. To assess the types of interactions that went together within a woman's network, transactions were aggregated to the most frequent level of the transaction from any provider. Thus, if a woman transacted with two network members and one provided a transaction once and the other provided it frequently, the level of that transaction for that event was frequently. This maximized the variance in network provisions for the purpose of scale development.

The 26 transaction items from the first stressor were then submitted to exploratory maximum likelihood factor analyses with both varimax and oblique rotations to identify potentially consistent item clusters.

Seven factors were found (with 1.0 eigenvalue cutoffs) from which potential transaction subscales were identified, of which five were interpretable using both types of rotations. We then utilized internal consistency analyses (Cronbach's  $\alpha$ ) to assess the potential scales. Thus, from the 11 transaction dimensions with which we began, only 5 interpretable transaction scales (using 18 of the 26 items) were developed. Two reflected positive supportive transactions: Optimistic/Caring (5 items  $\alpha = .77$ ) and Self-reliance (4 items  $\alpha = .62$ ). (See Table 2 for items comprising the scales.) Three corresponded to negative transactions: Criticism/Conflict (3 items  $\alpha = .79$ ), Hindrance (3 items  $\alpha = .64$ ), and Letdowns (3 items  $\alpha = .57$ ). Based on the negative scales, no negative transactions were reported for 56% of the stressful events occurring for members of this sample. These five scales replicated fairly well within the second stressor sample. Furthermore, similar replicability was found for the network member sample. (See the bottom half of Table 3 for network member internal consistencies.) For example, Optimistic/Caring had reliabilities of .71 and .64 when cross-validated in the two network member samples. The expected shrinkage in internal consistencies in the network member data appeared acceptable for all scales except Letdowns (also the weakest scale in the respondent data). Letdowns was retained, however, because it was felt to reflect an important conceptual distinction worth exploring further. The scales were then scored for all transaction providers named by the respondent for each stressor.

After the scales were developed and found to be fairly stable across samples, averages aggregated across providers were used to represent the levels of provision received for each type of transaction for that stressor. For example, if there were four providers for the first stressor, their average level of Criticism/Conflict was used to represent the participant's transactions for that stressor. Similarly, the amount of Criticism/Conflict from children was computed as the sum of Criticism/Conflict divided by the number of children providing transactions for that stressor.

The intercorrelation of the transaction scales at the stressor level of aggregation showed an unexpected association of positive and negative transactions (see the top half of Table 3). Optimistic/Caring and Self-reliance transactions were indeed positively correlated, and the negative transactions scales were similarly correlated with each other as well. However, Self-reliance transactions also were weakly related to the Hindrance negative transaction scale, suggesting that under certain conditions, the encouragement of self-reliance may "misfire" and be perceived negatively by the recipient. This same overall pattern of correlations was found in the network member sample for both the first and second network member, although network members also report associations of optimism with hindrance and self-reliance with criticism (see the bottom half of Table 3).

Finally, the relation between overall perceived network closeness and stressor-specific transactions was not strong (see the top half of Table 3). Perceived net-

**Table 2.** *Items and Event Transaction Scale Reliabilities*

Scale ( $\alpha$ ) and Items	<i>M</i>	<i>SD</i>
Optimistic/Caring ( $\alpha = .77$ )	5.0	3.75
Showed They Care for You		
Were There for You		
Reminded You of Your Strengths		
Complimented You		
Helped You See Things Were Not So Bad		
Encouraged Optimism and Hope		
Self-Reliance ( $\alpha = .62$ )	1.55	2.14
Encouraged You to Make an Effort		
Encouraged You to Make Your Own Decisions		
Made You Feel in Control of Your Future		
Encouraged You to Work on Problems Your Way		
Criticism/Conflict ( $\alpha = .79$ )	.39	.98
Criticized You/Made You Feel You Weren't Handling Things Well		
Provoked Conflicts or Feelings of Anger		
Used You/Took Advantage of You		
Hindrance ( $\alpha = .64$ )	.34	.76
Tried to Control What You Were Doing		
Interfered With What You Were Trying to Do		
Was Pessimistic About Your Situation		
Letdowns ( $\alpha = .57$ )	.33	.75
Let You Down When You Needed Him/Her		
Seemed Distant or Uncomfortable Around You		
Told You to Try to Ignore the Situation		



**Table 3.** *Stressor-Level Correlations of Transaction Scales*

	Optimistic	Self-Reliance	Criticism	Hindrance	Letdowns					
Respondent Correlations ( <i>N</i> = 348 Stressors)										
Self-Reliance	.44**									
Criticism	-.04	.09								
Hindrance	.04	.12*	.35**							
Letdowns	-.01	.08	.46**	.13*						
Network Closeness	.12	.08	-.29**	-.14*	-.06					
Global Negative	-.06	.00	.18**	.08**	.21**					
	Optimistic		Self-Reliance		Criticism		Hindrance		$\alpha$	
	<i>N</i> <sub>1</sub>	<i>N</i> <sub>2</sub>	<i>N</i> <sub>1</sub>	<i>N</i> <sub>2</sub>	<i>N</i> <sub>1</sub>	<i>N</i> <sub>2</sub>	<i>N</i> <sub>1</sub>	<i>N</i> <sub>2</sub>	<i>N</i> <sub>1</sub>	<i>N</i> <sub>2</sub>
Network Members ( <i>N</i> <sub>1</sub> = 107 Respondents; <i>N</i> <sub>2</sub> = 64 Respondents)										
Self-Reliance	.53**	.50**							.73	.62
Criticism	.03	.02	.34*	.36**					.57	.77
Hindrance	.23*	.34**	.35*	.37**	.52**	.55**			.62	.55
Letdowns	.04	.17	.19	.13	.52**	.39*	.48*	.46*	.43	.43

Note: The top section analyses are at the stressor level of analyses, and the bottom section analyses are at the respondent-level of analyses from each of the two network members.

\**p* < .05. \*\**p* < .01.

work closeness was not related to Optimistic/Caring or Self-reliance transactions, but was significantly related to the absence of Criticism/Conflict and Hindrance. The global rating of negative network transactions was associated with Criticism/Conflict and Letdowns.

**Variability in Transactions, Stressors, and Providers**

Variability in transactions across stressors most often occurred for negative transactions, as evident in Table 4; MANOVA (Stressors) Pillais' *V* = .21, *F*(15, 921) = 4.6, *p* < .001. Criticism/Conflict provisions and Letdowns were most commonly reported in association with interpersonal difficulties. Hindrance was most often experienced for personal health problems and least for other's health problems. On the other hand, Optimistic/Caring transactions did not vary across stressors, although there was a trend for it to be highest for personal health problems. Self-reliance provisions, although significant across stressors and highest for self-health and interpersonal events, showed no significant post hoc differences despite a significant *F* value in the ANOVA.

Transactions generally varied by providers, as evident in Table 5; MANOVA (Providers) Pillais' *V* = .25, *F*(20, 2244) = 7.38, *p* < .001. Spouses, adult children, and friends reportedly provided the highest levels of Optimistic/Caring transactions, whereas adult children most frequently encouraged Self-reliance. Negative transactions were most frequently provided by spouses, adult children, and extended family members, rather than by friends or other people. Hindrance was reported as coming from adult children. Because rela-

tively few spouses were available to be sought for transactions, there appears to be insufficient statistical power to detect their frequent hindering transactions. More specifically, although only 19% of all transactions by providers were reported as having any negative aspects, transactions with spouse were perceived as having negative aspects 33% of the time, adult children 29%, and extended family 24%. In contrast, friends provided negative transactions only 8% of the time, and others 15%. Racial differences in transactions were nonsignificant according to the MANOVA.

**Global and Stressor-Specific Transactions**

We conducted regression analyses predicting CES-D depressive symptom scores to assess the relative contribution to depression of event-specific transaction and global perception measures (Table 6). As expected from previous studies, both overall network closeness and the global measure of negative network transactions were consistently related to depressive symptoms, but there was no overall contribution of stressor-specific transactions to the prediction. There is no change in the lack of direct contribution of stressor-specific transactions to predicting depression when additional predictors are included, or if the global negative variable is dummy-coded for the presence of only one person being mentioned (results not shown in Table 6). The result is the same when logistic regression is used to predict attainment of a CES-D score of 16 or higher (i.e., above the standard cutpoint for clinical depression) or when the skewed negative event-specific transaction variables are dummy-coded

**Table 4.** Analysis of Variance of Stressor-Specific Transactions by Stressor Types

	Stressors								F
	HS <sup>a</sup>		HO <sup>b</sup>		I <sup>c</sup>		L <sup>d</sup>		
	M	SD	M	SD	M	SD	M	SD	
Optimistic/Caring	5.1	3.2	4.6	2.9	4.2	3.7	4.5	3.5	ns
Self-Reliance <sup>e</sup>	1.6	2.0	.8	1.6	1.7	2.2	1.1	1.9	2.66*
Criticism/Conflict <sup>f</sup>	.3	.6	.1	.3	.7	1.1	.2	.7	7.50**
Hindrance <sup>g</sup>	.4	.8	.1	.4	.4	.8	.2	.5	2.69*
Letdowns <sup>h</sup>	.2	.4	.1	.4	.6	.9	.1	.3	16.38***

Note: These analyses are at the stressor level of analyses to reflect all data from each of the two stressors provided by respondents. Respondent-level analyses selecting only one stressor per respondent also reveal between-transaction differences. HS = Health Self; HO = Health Other; I = Interpersonal; L = Loss. Multivariate Analysis of Variance (Stressors) Pillais' V = .21, F(15, 921) = 4.6, p < .001.

<sup>a</sup>n = 135. <sup>b</sup>n = 44. <sup>c</sup>n = 81. <sup>d</sup>n = 53. Post hoc tests: <sup>e</sup>Tamhane ns. <sup>f</sup>Tamhane I > HO, HS, L. <sup>g</sup>Tamhane HS > HO. <sup>h</sup>Tamhane I > HO, HS, L. \*p < .05. \*\*p < .001.

**Table 5.** Analysis of Variance of Stressor-Specific Transactions by Providers

	Sp <sup>a</sup>		Ch <sup>b</sup>		ExFm <sup>c</sup>		Fr <sup>d</sup>		Op <sup>e</sup>		F
	M	SD	M	SD	M	SD	M	SD	M	SD	
Optimistic/Caring <sup>f</sup>	5.5	5.1	6.0	4.2	3.3	4.9	5.6	3.9	2.3	2.5	35.9**
Self-Reliance <sup>g</sup>	2.4	3.7	2.4	2.9	.9	2.1	1.1	1.9	.8	1.8	12.9**
Criticism/Conflict <sup>h</sup>	.3	.9	.3	.8	.8	2.2	.1	.7	.3	1.0	2.9*
Hindrance <sup>i</sup>	.7	1.3	.5	1.0	.2	.9	.2	.6	.2	.6	6.9**
Letdowns <sup>j</sup>	.4	.9	.3	.7	.6	1.3	.1	.6	.2	.7	2.4*

Note: These analyses are at the respondent level of analysis averaging across all providers and both events per respondent. Sp = Spouse; Ch = Children; ExFm = Ex-Family; Fr = Friends; Op = Others. Multivariate Analysis of Variance (Providers) Pillais' V = .25, F(20, 2244) = 7.38, p < .001.

<sup>a</sup>n = 45. <sup>b</sup>n = 144. <sup>c</sup>n = 87. <sup>d</sup>n = 140. <sup>e</sup>n = 151. Post hoc tests: <sup>f</sup>Tamhane Sp > Op; Ch, Fr > ExFm, Op. <sup>g</sup>Tamhane Ch > ExFm, Fr, Op. <sup>h</sup>Tamhane ns. <sup>i</sup>Tamhane Ch > ExFm, Op. <sup>j</sup>Tamhane ns. \*p < .05. \*\*p < .001.

**Table 6.** Regression of Stressor-Specific Transactions and Global Perceptions on Depressive Symptoms (CES-D)

Variable	B	SE B	β	r
Network Closeness	-4.7	1.1	-.38***	-.32**
Global Negative	2.0	.8	.23**	.20*
Optimistic/Caring	.0	.3	.01	-.04
Self-Reliance	.4	.5	.08	.03
Criticism/Conflict	-.8	1.3	-.06	.11
Hindrance	-1.0	1.4	-.07	.00
Letdowns	2.1	1.5	.12	.18*

Note: N = 214 Respondents. CES-D = Center for Epidemiological Studies-Depression Scale. R<sup>2</sup> = .18 (p < .000). These analyses are at the respondent level of analysis, averaging across both stressors and all providers for each respondent.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

to control for extreme distributions (results not shown in Table 6). In no case did event-specific transactions predict depressive symptoms beyond that accounted for by the global positive and negative measures.

### Discussion

This article advances the study of social transactions by presenting data on the development of a stressor-specific approach to assessing positive and negative trans-

actions reported by older women. We developed scales to measure five aspects of stressor-related transactions, which we labeled Optimistic/Caring, Self-reliance, Criticism/Conflict, Hindrance, and Letdowns. As hypothesized, type of transaction varied by stressor and provider, but not by race. Optimistic/Caring, Self-Reliant, and Hindrance transactions were more commonly reported for own health problems than for other kinds of stressors. Interpersonal difficulties were most commonly associated with Criticism/Conflict and Letdowns. The family was a major source of negative

transactions, with adult children providing the highest percentage of difficult transactions.

Larson et al. (1986) posed an interesting dilemma with regard to the social relationships of older adults. They noted that family members contribute more to the care and physical well-being of older adults, yet interaction with family members appears to be less related to happiness and a positive sense of well-being than are interactions with friends. This research provides one answer to this dilemma. Although family members may provide more care, they also are the main source of negative interactions reported by older adults. Spouse and children are not major sources of criticism and conflict; these are more likely to occur with extended family members. However, the immediate family is the major source of hindrance interactions, a finding that would not have been discovered without the differentiation of negative interactions that this article's methodology provided. A second advantage of our methodology is that we were able to show that spouse and children are also major encouragers of self-reliance reported by older adults. So the interactions provided by immediate family members are truly multidimensional. They sometimes may block or hinder some actions, while at the same time encouraging self-reliance. This duality is most likely to occur for the respondent's own health problems, where the social control functions of social relationships (Heller & Rook, 1997) are likely to be most apparent—that is, with network members attempting to discourage injurious health behavior while encouraging more active self-control.

Our findings also imply that there is a natural matching between stressors and the transactions they elicit and similarly between providers and their transactions. Despite the rather broad categories used here for stressors and relationships, differences in types of provisions were found related to both stressor and provider. Theoretically, these findings support a person-environment transactional model of provisions: Transactions appear to be determined in part by the challenge being addressed, the providers being accessed, and the participant (Lakey, McCabe, Fiscaro, & Drew, 1996). From a methodological point of view, this means that misleading results are likely to be obtained if only one stressor is sampled to determine characteristic patterns of coping and support. In this study, older women were most likely to first nominate a personal health problem for which positive support from others predominated. Very different types of transactions were likely for other stressors. It was necessary to probe for interpersonal difficulties to uncover the presence of Criticism/Conflict and Letdowns.

A second contribution is that these findings provide further evidence of systematic differences in the networks of African American and White older women. In this study, African American women sought more nonfamily providers in dealing with stress and ac-

cessed a greater number of providers for each stressor. Despite the fact that network sizes were equal across ethnicity, network composition was very different, as were the network members who were accessed in dealing with stressors.

Our work supports research in the social network literature related to death rates of African Americans (Manton, 1992). In this study, African American women reported a greater frequency of past child deaths and also reported a greater frequency of network member losses in the last year. These findings are consistent with data from state death records that show higher infant mortality rates over the last 60 years, as well as higher current adult death rates for African Americans generally (Indiana State Department of Health). However, although they may be experiencing more losses, it is important to note that rates of depressive symptoms were not higher for the African American women in this sample. Although there are links in the clinical literature between loss and depression, this finding usually refers to parental loss at an early age (Barnes & Prosen, 1985; Harris, Brown, & Bifulco, 1986). Later-life losses and losses of network members other than parents is rarely studied, and when it is the results are more equivocal, implicating loss events such as separation and divorce more than death (McLeod, 1991; Phifer & Murrell, 1986). Our results are in agreement with Phifer and Murrell (1986) in that bereavement and death were not significantly associated with depressive symptoms in this sample.

A last issue addressed in this article was the relative contribution of stressor-specific transactions and global social perceptions to depressive symptom levels. We found that only global constructs, crude as they were, were significantly predictive of depressive symptoms. This finding can be approached in a number of ways. We could simply fault our measures on psychometric grounds, because some internal consistencies were low. However, a more substantive approach is to apply insights from the literature on global and specific approaches to social support (Davis, Morris, & Kraus, 1998; Lakey et al., 1996; Pierce, Sarason, & Sarason, 1991). A great deal of work, especially by Lakey and associates, suggests that measures of perceived support function as broad schemas of self in the social world. These schemas are hypothesized to be relatively resistant to change in relation to particular stressors and transactions. We think it likely that global negative network measures may function similarly. Global negative schemas are relatively independent of positive support (average network closeness in this study) and are related to depressive symptoms. Specific negative transactions are related to global negative network perceptions; however, their relations to symptoms are probably mediated through more global and higher order schemas.

An interesting question, which cannot be addressed in this cross-sectional study, concerns the causal determinants of global negative network perceptions. Are negative global network perceptions largely the result of depressive schemas and symptoms? If this were true, global negative perceptions would be state-dependent on the severity of depression. As depression improves, global negative perceptions should decrease even though event-level transactions may be just as negative. A second view is that global network perceptions could operate in a "bayesian" sense, as an a priori view of the expected social world that is only slowly modified by new evidence (ongoing positive and negative transactions). Eventually, if one's transactional world is heavily critical, hindering, or disappointing, global perceptions will become more negative. A third view is represented in the transactional model advocated by Coyne et al. (1990). Both depressive withdrawal and global negative expectancies could lead to hypersensitivity in transactions. A small bit of evidence in our study in favor of this latter perspective is the finding of a significant relation between letdowns and depressive symptoms. In contrast to Criticism/Conflict and Hindrance, which are more likely to correspond to the actual behaviors of others, Letdowns are more likely to be in the "eye of the beholder," reflecting disappointment with what did not happen, as well as with what did. These questions cannot be resolved here, but they follow from the findings of this study.

## Limitations

This report is the first from a broader study of the relation between network transactions and depressive symptoms in community-dwelling older women. The sample on which these findings were based was intentionally stratified, oversampling women with depressive symptoms. We also oversampled African American women, so this was not a representative sample of elderly women in the community. It is conceivable that the findings reported here are biased in some unknown way by these characteristics or other sampling biases; however, we found little evidence of this in various analyses that were completed.

A second problem we encountered is that it is difficult to construct multi-item scales when endorsement rates are as low as they tend to be for negative transactions. Based on the initial item pool of 26 items, we had to accept respondent scales with reliabilities that ranged from a low of  $\alpha = .57$  to a high of  $\alpha = .79$ . The network member cross-validation of these scales was somewhat lower, and the Letdown scale much lower. Clearly, a broader item pool in future work could improve the strength of these initial versions.

Finally, the data reported here are based on self-report. However, our scales appear to be replicated in the transaction reports from the significant others of these

older adults. Future reports will examine further the structure of network provisions from the additional perspective of significant others.

In summary, this study provides an examination of stressor-specific negative transactions in older women. This measurement approach has promise in revealing transactional selectivity in the face of different stressors. We have a method that tracks how older women access significant others and perceive the provisions they receive. As predicted, negative transactions were found to vary by type of stressor and provider. Unexpectedly, specific provisions related to the most important stressors in the last year did not relate to depressive symptoms: Only global measures of positive and negative provisions were viable predictors. We believe these findings may imply that global perceptions of negative provisions function much like global perceptions of perceived support, in the sense that they exhibit a consistent relation to psychological symptoms that cannot be directly accounted for by the provisions individuals actually report receiving. These findings support a view that global negative perceptions operate in a schema-like way to shape one's view of the social world. What remains is understanding the mechanisms by which more global negative views of the social world come into being, how they relate to psychological health, and how they are influenced by the ongoing transactions that are part of the lives of older women.

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