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ABSTRACT

The theoretical model of Bengtson et al (1976) for the measurement of intergenerational solidarity proposes that dependency needs and residential proximity modify helping behavior, while filial responsibility mediates the effects of residential proximity. To examine the relative importance of the model in predicting parent/child solidarity among a southeastern United States older population in rural to urban transition, data collected from 321 adults, aged 65 to 96 (38% male, 94% white) were analyzed. Everyone 65 years or older, within the selected area, (82% response rate) was interviewed using a questionnaire designed to assess family solidarity (association, affection, and consensus) across seven categories of kin. In depth information on kin focused on the relative with whom there was the most contact. The results supported the Bengtson et al model of family solidarity, as measured through association, consensus, and affection. However, only affection and consensus were significantly correlated. The extent of the exchange of helping behavior between older parents and children was a better predictor of family cohesiveness than was sex of the child, dependency needs of the parent, or the extent of telephoning and writing. Older parents who reported higher levels of mutual help, who had more positive attitudes toward their own aging, who were more likely to envision children as reasonably responsible to them in illness, financial duress and loneliness, and who had educational backgrounds similar to those of their offspring, reflected higher family solidarity than others. (BL)

KIN GROUP SOLIDARITY AMONG THE AGED[1]

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The importance of the social bond to the role performance of groups is well documented. A review of the literature on social bonding shows that human interation is primarily based upon three interrelated elements: association, affection, and consensus (Black & Bengtson, Note 1; Homans, 1950; Merton, 1957; Nisbet, 1970). Based upon this premise, Bengtson, Olander, and Haddad (1976) postulated that if the family can be viewed as a prototype of all small groups, and if consensus, affection, and association are universal indexes to group bonding or solidarity, it stands to reason that these measures would act as a similar index of intergenerational or lineage solidarity (p. 247). This conceptualization is of significance to researchers and practitioners alike because of the recognized relationship between family cohesiveness and kinship function, i.e., the positive association between family bonds and extent of emotional and physical support available through the kinship group.

Using the trigonal concept of interpersonal bonds, Bengtson and associates (1976) developed a theoretical model for the measurement of intergenerational solidarity. Axiomatic to the theory is that any variable that contributes to an increase in any one of the three dimensions of the solidarity construct, contributes correspondingly to intergenerational solidarity as a whole. Predictor variables basic to the model include residential proximity, helping behavior, American birth, acceptance of changed norms for the elderly, and experiences on shared across generational lines (Bengtson et al., 1976, p. 257). Secondary variables, or variables posited as modifying the effects of the primary variables include: dependency needs of the elderly; communication, letters, telephone; filial responsibility; and type of sex linkage. In general, the propositions posit that family solidarity will be greater where there is close proximity to

kin, frequent helping, American birth, acceptance of changes associated with aging, and a minimum of social disparity between lineage kin. These effects, however, may be variously modified by the health or other needs of the elderly, indirect contacts, feelings of kin responsibility to the older generation, and the sex of younger and older kin. In sum, dependency needs and residential proximity modify helping behavior; sex linkage modifies the effect of residential proximity on helping behavior; and filial responsibility mediates the effects of residential proximity on family solidarity and of residential proximity on helping behaviors.

Bengtson and associates (1976) have proposed the theoretical construct intergenerational solidarity and its propositions for consistent further research in the examination of intergenerational solidarity. The present study was an exploratory effort to examine the theoretical model as proposed by Bengtson et al. with regard to its overall predictive power in a rural transitional area. More specifically, it was the purpose of the study to examine the overall as well as the relative importance of the model's components in the prediction of parent-child solidarity among an older population living in an industrial area of rural to urban transition.

PROCEDURES

Sampling and Measurement

This study was a secondary analysis of data collected on 321 adults aged 65 to 96 years living in a rural transitional area in the southeastern United States. The county of location has undergone transition from an agriculturally based economy to an industrial one, centered on textile production, within the past three generations. Subjects were selected using an area clustering sampling strategy with stratification for the inclusion

of rural and urban areas. Everyone 65 years or older living within a selected area was interviewed. The response rate was 82%.

The data were collected by trained interviewers who administered a 141 item questionnaire to the respondents in their homes. The questionnaire was designed to provide information on a range of variables theoretically linked to family solidarity for each of seven categories of kin. Other descriptive information was included as was necessary to the interpretation of the major variables of interest. Only persons with one or more children were used in the present analysis (N = 276).

The mean age for older parents was 74.2 years and they had a mean educational level of 9.4 (s.d. = 3.5). Approximately 38% of the subjects were males and 62% were females. White adults composed 94% of the sample with the remaining 6% being black. The majority of both men and women (61%) were married. Approximately 49% of the children of focus were sons, and 51% were daughters. The age range of children was from 21 to 75 and their mean age was 44.4 years. The median annual income for older parents was $4,260.00. Approximately 90% of daughters were employed. Jobs were typically classified as craftsman in type and corresponded characteristically to local industries.

Information on the questionnaire included general demographic data; marital history; information on health, retirement, income, morale, social roles, and interaction with kin; helping patterns with kin; and expectations for kin assistance. In depth, information on kin was represented by information on the relative with whom there was the most contact in each category of kin. For purposes of the present analysis, only information relative to the child with whom there was the most contact was used and only those items relative to the objectives of this study will be discussed.

The dependent measure, family solidarity, was a composite of three measures: frequency of association (associational solidarity); extent to which the respondent perceived getting along with the child and emotional closeness to the child (affectional solidarity); and the extent of parent-child agreement (consensus solidarity) (Black & Bengtson, Note 1).

Frequency of association was measured by how often parents engaged in 12 activities with the child. Activities included commercial, home, and outdoor recreation; visits; vacations; family reunions, emergencies; working together; baby sitting; holidays; church; and shopping. Responses for each item were coded according to the frequency of the activity: (1) never; (2) less than once a year; (3) once a year; (4) several times a year; (5) once a month; (6) several times a month; (7) once a week; (8) several times a week; and (9) daily. The extent to which parents and children get along was measured by responses on a five point Likert scale to the question, "How well would you say that you get along with (name of child)?" Similarly, closeness was determined by responses to the question, "How close would you say that you feel to (name of child)?" In order to assess consensus, respondents were shown a picture of a ladder with ten rungs assigned 0-9. They were told, "Looking at this picture of a ladder, suppose that the top of the ladder represents total agreement of views about life and the bottom represents total disagreement. Where on the ladder do you feel that (name of child) and you stand at the present time?" (Cantril, 1965). Scores for each of the measures of association, affection, and consensus were standardized and summed in order to form a composite score of solidarity. Cronbach's alpha of reliability for the measure was .95.

The independent variables consisted of eight measures. Acceptance of changed norms for the elderly was operationalized through the use of the

revised 17 item Philadelphia Geriatric Center Morale Scale (Lawton, 1975) Internal consistency of the measure as determined by Cronbach's alpha in the present study was .83. Possible score range was from 17 to 34. Dependency needs of the elderly was operationalized through a measure of self-rated health. Respondents were shown a picture of a ladder containing rungs numbered from 0-9. They were told, "Suppose that the top of the ladder represents perfect health and the bottom represents the most serious illness. Where on the ladder would you say your health is at the present time?". Educational disparity was defined as experiences not shared across generational lines and was a measure of educational differences between parent and child. (Child's educational level minus that of the parent's).

Mutual help (helping behavior) was determined by a composite of help received and help given. Each scale, in its original form, consisted of 11 helping behaviors that included help with transportation, minor household repairs, housekeeping, shopping, yardwork, car care, illness, important decisions, legal aid, financial aid, and other help specified by the respondents. The subjects were asked how often the child helped with the above activities and how often they had helped the child within the past year. The same frequency of response schedule was used as was employed with the associational measure. A factor analysis of the scale showed that it could be reduced to a three factor, 12 item scale. The first factor, a measure of help received, consisted of seven items with factor loadings ranging from .51 to .79. The second factor consisting of three items was a measure of help given (transportation and financial) and had factor loadings ranging from .54 to .75. The third factor also dealt with help given (domestic) with loadings of .58 and .84. Internal consistency for the measure was .82. Possible score range was from 12 to 108.

Proximity to the child (residential propinquity) was a measure of how close the child lived to the parent: in the some household, 10 minutes away or less, 11-30 minutes away, 31-60 minutes away, over 60 minutes to less than a day away, and one day or more away, coded 1 through 6, respectively. Communication: letters and telephone was a composite score of the frequency with which the child telephoned and wrote to the parent. The scoring scheme followed that used for the associational and helping measures. Possible score range was from 2 - 18. Filial responsibility was measured through responses to four scenarios depicting hypothetical situations of older persons who needed financial help, aid during illness, or who were lonely. The respondents were asked to indicate the degree of responsibility that they felt children should assume in helping these older parents. Type of sex linkage was established through cross parent-child sex combinations: father-daughter, father-son, mother-daughter, mother-son.

The variable American birth as proposed in the conceptual model was dropped because of the paucity of adults of foreign birth in the population.

Analyses

Pearson product-moment correlations were performed on all continuous variables in the model in order to determine (1) univariate relationships with the dependent measure solidarity, and (2) relationships between independent variables (multicollinearity). Stepwise multiple regression was used to examine the relative importance of the eight independent variables to family solidarity. The predictor variables were entered into the equation in the order of the amount of variance that they could explain in the dependent measure, family solidarity. Unordered they included; sex-linkage, eduational disparity; dependency needs; communication: letters and telephone; filial responsibility; geographical proximity; attitudes

toward own aging, and mutual help. Three dummy variables were created for the sex-linkage factor with the mother-daughter link serving as the referent. Standardized beta coefficients were used to determine the importance of a predictive variable relative to other predictors in the model.

RESULTS

Zero-order correlations between the three dimensions of the solidarity variable showed relationships between the affection and consensus components only $r = .26$, $p < .001$. No significant relationship was found between association and affection or association and consensus.

Table 1 presents the ranges, means, and standard deviations of the continuous variables used in the analysis. The data showed moderate to low levels of mutual help between parents and children. Cursory observations of percentages indicated that older parents were more likely to receive help than to give help. Approximately 60% indicated that their child had helped them during the past year with transportation, 48% had received assistance during illness, 42% had received help with shopping, and 32% received assistance with housekeeping. Other assistance was minimal. In contrast, 25% of the parents reported providing transportation for children during the past year, 17% had assisted the child during illness and assisted with shopping, and 11% had helped with housekeeping. Help beyond the four categories mentioned was minimal. Assistance given or received was usually occasional. The results of a t test showed that older parents receiving higher levels of assistance gave more assistance, $t = 2.70$ (244) $p < .01$.

Data in Table 1 suggest that parents' attitudes toward their own aging were more positive than negative and that older adults generally felt that children had some responsibility to them in health, financial and/or emotional crisis. Dependency needs as viewed through perceived health

appeared to be relatively low, and educational differences suggested little social disparity between generations. This latter finding was reinforced through the observation that the majority of referent children, 89%, lived within 60 minutes of older parents, consequently suggesting minimal levels of social mobility as projected through geographic propinquity. Table 1 suggests moderate levels of telephoning and letter writing between the two generations. A breakout of these data showed that approximately 52% of the parents received a telephone call from the child of focus several or more times a week and 51% received a letter several or more times a year from the child. Approximately 43% of the parents never received mail from the child, a probable consequence of close geographical proximity.

[Table 1 about here]

Table 2 shows that all continuous independent variables had a univariate relationship with the dependent variable, family solidarity. A moderate amount of multicollinearity was observed between the exogenous variables. The matrix shows mutual help to be most frequently related to other variables. Zero-order correlations were observed with parents' attitudes toward their own aging, dependency needs, geographical proximity, communication, and filial responsibility. Mutual helping was more likely to occur when parents' attitudes toward aging were negative, when their health was poor, when the child of most contact was nearby, when there was more telephoning and writing, and when filial expectations were high.

Geographical proximity was correlated with three of the seven independent variables: educational disparity, mutual help (previously described), and filial responsibility. Close geographical proximity to a child was associated with few parent-child educational differences and lower filial expectations. In addition, attitudes toward aging was positively

correlated with health, i.e., positive attitudes increased with good health.

[Table 2 about here]

Table 3 presents the regression analysis predicting family solidarity. The results show that the independent variables explained 32% of the variance in family cohesiveness, $R = .57$ ($R^2 = .32$) $p < .001$. Comparison of the regression coefficients indicates that mutual help was the strongest predictor of family solidarity (accounting for 59% of the explained variance), followed in importance by attitudes toward own aging (19%), geographical proximity (11%), filial responsibility (7%), and educational disparity (3%). Dependency needs, sex linkage, and communication were of no relative predictive importance. Based upon Table 2, dependency needs appeared to be suppressed in the regression analysis through its relation to mutual help, and communication accounted for no unique variance beyond that explained by mutual help.

In sum, the results of the regression analysis showed that five of the eight independent variables were predictive of family solidarity scores. The findings indicate that the extent to which older parents and children exchange help are better predictors of family cohesiveness than other physical, social, and psychological factors investigated. Older parents who report higher levels of mutual help; who have more positive attitudes toward their own aging; who are more likely to envision children as reasonably responsible to them in illness, financial duress and loneliness; and adults who have educational backgrounds similar to those of their offspring reflect higher family solidarity than others.

[Table 3 about here]

Discussion and Summary

Results of this study support conceptualizations of Bengtson et al. (1976) that family solidarity, as measured through association, consensus, and affection can be predicted by a number of physical, social, and psychological variables. The data verify the primary importance of residential propinquity, helping behavior, and acceptance of changed norms for the elderly as basic to the theory of intergenerational solidarity. All of the factors previously identified by Bengtson et al., however, do not explain a significant amount of difference in solidarity between generations when the effects of all factors are considered. While family solidarity is influenced by the amount of help exchanged between parent and child, older parents' attitudes toward their own aging, geographical nearness to a child, filial expectations for assistance, and social parity between generations; sex of the child, dependency needs of the parent, and extent of writing and telephoning are of no relative predictive importance to solidarity. As suggested by Bengtson and associates (and seen through zero-order correlations in the present study) a number of these variables may have important modifying effects in the model as might be demonstrated through path analytic or similar procedures.

The data are less conclusive on the extent of interrelatedness of the three components comprising solidarity. That is to say, contrary to Bengtson and associates' axiom, association was not related to the affection and consensus dimensions of the construct. This observation, however, did not appear to have important implications for the overall reliability of the scale.

The data show the primacy of mutual help to the parent-child relationship as observed through the finding that this variable accounted for over one-half of the variance explained in the model. Bengtson et al.

pointed out the important relationship between helping behavior and affection (a dimension of the solidarity measure in the present study). They proported that helping behavior, especially of the non-essential kind appears to be the chief indicator of affectional solidarity thatoccurs within the family. In the case of the present study, the major help exchanged was more vital in nature. The relatively low levels of mutual help observed in this study may have been related to a moderate to low dependency level of parents as viewed through mean health rating. Low helping behaviors (as well as the lack of observance of a sex-linkage) may also have occurred as a result of the high percentage of daughters who worked. Lang and Brody (1983) found that middle-aged daughters provided significantly less help to older mothers if they were employed.

The data suggested a moderate lack of reciprocity in helping patterns. Parents appeared to receive more help than they gave. Research in general has shown a mixed pattern of helping which differs considerably according to the type of aid being exchanged (Atchley, 1980). The importance of reciprocity to helping patterns in the present study was suggested through the observation that parents receiving more help, gave more help. With regard to the flow of help from the older generation, Troll (1971) reported that most parents give to their children as much as they can for as long as they can based upon their financial and physical capacities to offer aid.

Amount of help exchanged was seen to be interrelated to all other variables in the model with the exception of educational disparity. This observation pointed out the complexity of helping behaviors in terms of the number of situational factors impacting on intergenerational patterns. The strong zero-order correlation with geographical proximity confirmed reports by Bengtson and associates of the important relationship between residential

propinquity and helping behavior, i.e., the nearer the places of residence, the greater the probability that helping behavior will occur. Similarly, Wilkening, Gurreo, and Ginsberg (1972), following a study on the effects of geographical distance on intergenerational ties among farm families, reported the adverse effect of limited face-to-face contact on helping behaviors. Other forms of interaction such as telephoning, writing, or the giving or receiving of financial aid, however, were not affected significantly. In the present study the importance of continuing contact to helping behavior was observed through the finding that mutual help increased with the frequency of writing and telephoning between generations.

An important correlate of helping behavior in the present study was parents' attitude toward their own aging, or morale. The observation that negative attitudes were associated with more helping is probably explained through the finding that helping increased when parents (or children) were in poor health and the associated relationship between poor health and negative affect (Larson, 1978). Helping behavior was also more likely to occur when older parents were in poor health, and when they held high expectations for assistance. Seelbach (1978), in examing the correlates of older parents' filial responsibility expectations and realizations found a positive correlation between parents' expectations for help and actual need. Furthermore, he observed that adult children seem to increase their support in response to their parents' increasing needs. Similarly, Sussman and Burchinal (1962) and Aldous and Hill (1965) pointed out the stimulating effect of health needs on helping behavior.

In sum, mutual helping, as a primary predictor in family solidarity, appears to be a function of convenience to children, level of parents' dependency, and parental expectations. Helping levels between parents and children are generally low except in the area of transportation. This

finding would appear to be related to relatively low dependency needs (health) of older parents and moderate to high transportation dependency. Appearingly, also contributing to this observation is the high level of employment found among daughters. These findings implicate local cultural milieu as a factor in patterns of intergenerational interaction.

Acceptance of changed norms for the elderly, or parents' attitudes toward their own aging, the second most important predictor of family solidarity in the present study was also related to dependency needs, or health, of the older parent. The measure, primarily an indicator of morale, has been consistently reported as a primary correlate of health (Larson, 1978). Bengtson et al. (1976) proposed that this relationship between the attitudes variable and family solidarity was due in the main to the consensus dimension of the solidarity concept. That is, if family traditions permit the acceptance of changed norms for the elderly (as reflected in this case through parents' attitudes) by both the older and younger generations, this factor would be positively correlated with consensus solidarity (p. 256).

Geographical closeness to a child, the third most important predictor of family solidarity was observed to be related to two other correlates in addition to mutual behavior (previously discussed). The greater educational differences observed among parents and children who lived further apart possibly reflected upward social mobility among the second generation. Akin to this finding was the observation that parents' filial expectations were higher for children living greater distances from them. That is, it is possible that parents' expectations increased with their perceptions of childrens' ability to provide assistance. Children who lived farther away (possibly representing more affluence) were expected to

contribute more to older parents' well-being. Although spatial difference has been found to affect the realization of filial expectations, it generally has not been observed to diminish family bonds (Troll, 1971).

In summary, results of the present study show that the extent of cohesiveness between older parents and children as measured by affection, consensus, and association, can be predicted by a number of factors previously identified as important to family solidarity (Bengtson et al., 1976). The data showed family solidarity to be best predicted by the amount of help exchanged between parents and children, followed by the extent to which older parents have accepted their own aging, the distance that children live from parents, the amount of filial expectations that older parents hold, and the extent of social disparity between generations as observed through educational differences. The findings illustrate the multiplicity of factors impacting upon helping behaviors between generations and reinforce the importance of a multivariate approach to studies of intergenerational relationships. Results from the study suggest the importance of cultural milieu such as female employment, social disparity, and occupational background to patterns of association and affect between generations.

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Reference Note

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Table 1. Mean, Range, and Standard Deviations for Continuous Independent Variables and Family Solidarity

Variables (N =276)	Mean	Range	S.D.
Mutual help	25.7	12-82	13.6
Attitudes toward own aging	28.9	18-34	3.8
Geographical proximity	4.1	1-6	1.4
Filial responsibility	9.9	6-12	1.2
Communications: letters & telephone	9.8	2-18	3.6
Dependency needs(Health)	5.8	0-9	2.2
Educational disparity	3.3	-8-18[a]	3.2
Family solidarity	1.0[b]	-2-3	.7

Note: N = 276

[a]Minus scores = parents more education than children

[b]Standarized score

Table 2. Zero-Order Correlations Between Continuous Variables Comprising the Family Solidarity Prediction Equation

Variables	1	2	3	4	5	6	7	8
1. Attitudes toward aging		.57***	-.05	-.23***	-.02	.05	-.02	.14*
2. Dependency needs			-.12*	-.19***	-.00	.04	-.00	.13*
3. Educational disparity				-.04	-.13*	-.05	-.07	-.18**
4. Mutual help					.33***	.14**	.14*	.41***
5. Geographical proximity						-.05	.15**	.33***
6. Communication							.03	.19***
7. Filial responsibility								.24***
8. Family solidarity								

Note: N variable according to pair wise deletion

*$p < .05$

**$p < .01$

***$p < .001$

Table 3. Analysis of Sources of Variation in Family Solidarity Scores Comprising Regression.

Variables	Step	B	t	Percent of charge
Mutual help	1	.40	6.77***	.19***
Attitudes toward own aging	2	.23	4.06***	.06***
Geographical proximity	3	.17	2.90**	.04***
Filial responsibility	4	.14	2.43*	.02**
Educational disparity	5	.12	-2.14*	.01*
Variables not in the Equation				
Dependency needs				
Communication				
Mother/Son vs. Mother/Daughter				
Father/Daughter vs. Mother/Daughter				
Father/Son vs. Mother/Daughter				

$F = 21.57^{***}$ (5,226) $R = 57$ Adjusted $R^2 = .32$

Note. $N = 226$

$^{*}p < .05$

$^{**}p < .01$

$^{***}p < .001$