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End-of-Life Planning in a Family Context: Does Relationship Quality Affect Whether (and With Whom) Older Adults Plan?

Deborah Carr,[1] Sara M. Moorman,[2] and Kathrin Boerner[3]

[1]Department of Sociology, Institute for Health, Health Care Policy and Aging Research, Rutgers University, New Brunswick, New Jersey.
[2]Department of Sociology, Boston College, Massachusetts.
[3]Research Institute on Aging, Jewish Home Lifecare/Mount Sinai School of Medicine, New York.

Objectives. Medical professionals typically approach advance care planning (ACP) as an individual-level activity, yet family members also may play an integral role in making decisions about older adults' end-of-life care. We evaluate the effects of marital satisfaction and parent–child relationship quality on older adults' use of advance directives (i.e., living will and durable power of attorney for health care [DPAHC] appointments) and end-of-life discussions.

Methods. Using multinomial logistic regression models and data from a sample of 1,883 older adults in the Wisconsin Longitudinal Study, we estimated the effects of marital satisfaction, emotional support and criticism from children, other social support, demographic characteristics, and health on general ACP (i.e., advance directive only, discussions only, both, or neither) and specific DPAHC appointments.

Results. Parents with problematic parent–child relationships were less likely to complete ACP, and marital satisfaction was positively associated with completion of both advance directives and discussions. Happily married persons were more likely to appoint their spouse as DPAHC, whereas persons who received ample emotional support from children were mostly likely to appoint an adult child.

Discussion. Family dynamics affect ACP in complex ways and should be considered in patient-provider discussions of end-of-life care.

Key Words: Advance care planning—End of life—Marital relations—Parent–child relationships.

At the end of life, most older adults suffer from chronic illness, physical discomfort, and compromised cognitive functioning. Under such conditions, they may be incapable of making decisions about their own medical treatments (Silveira, Kim, & Langa, 2010). Decisions about accepting or rejecting treatments often are left to family members who may not know the patient's preferences or who may disagree about an appropriate course of care. To help ensure that their end-of-life treatment preferences are articulated and heeded by care providers, people can complete advance care planning (ACP) when they are still cognitively intact. ACP comprises formal and informal components: formal ACP includes a living will, a legal document specifying the medical treatments one would like to receive, and a durable power of attorney for health care (DPAHC), which designates a person to make decisions on behalf of an incompetent patient. Informal planning refers to discussions about specific treatment preferences and general values. Practitioners concur that planning is most effective when the formal documents are executed following informal discussions with those persons who may represent the patient in the decision-making process (Doukas & Hardwig, 2003).

The efficacy of ACP may depend on the cooperation, knowledge, and participation of family members (Kehl, Kirchhoff, Kramer, & Hovland-Scafe, 2009). Family structure, including marital and parental statuses, affects both whether one engages in ACP and whom one names as DPAHC (Carr & Khodyakov, 2007; Kahana, Dan, Kahana, & Kercher, 2004). However, previous studies have not investigated the extent to which the *quality* of one's relationships with spouse and children affect whether, how, and with whom older adults prepare for end-of-life care. This partly reflects the fact that studies of ACP historically were based on clinical samples, often of single disease groups, and thus do not obtain rich, comprehensive measures of family relationships. Our study uses data from the Wisconsin Longitudinal Study (WLS), a long-term study of aging that obtains detailed measures on ACP along with general questions assessing family functioning, parent–child relationships, and marital relations; as such, our study represents a first step at exploring the impact of family context on older adults' end-of-life preparations.

Study Aims

The WLS obtained reports from relatively healthy older adults (aged 64–65 years) about their ACP, specific DPAHC designations, relationship quality, and potential confounds including socioeconomic status (SES) and health. These data enable us to explore associations between both positive and

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negative aspects of family relationships and two distinct ACP outcomes: one's general planning strategy (i.e., discussions only, both formal and informal planning, or neither) and whom one appointed as DPAHC (i.e., spouse, child, other, or none).

We expect that persons reporting greater marital satisfaction and more emotional support from children are more likely to engage in either of the two most effective types of ACP: discussions alone or a two-pronged approach comprising both formal and informal preparations. Similarly, we expect that a better quality relationship with a particular family member will increase the likelihood of that person being appointed DPAHC. These hypotheses are consistent with social support and control theories. The former states that individuals with high-quality relationships may be more highly motivated to engage in protective health behaviors (such as ACP) for the good of their family members. They also may feel encouraged to engage in ACP, a potentially stressful activity, due to the emotional support they receive from family (House, Landis, & Umberson, 1988). Social control perspectives, by contrast, emphasize that significant others may directly regulate, monitor, or urge a loved one's health behaviors (Lewis & Rook, 1999).

The potential impact of strained family relations, operationalized here as criticism from children, is more complex. Criticism from children could increase the likelihood of both ACP and selecting an adult child as DPAHC, if parents interpret such critical interactions as a concerned child's way of offering assistance. Conversely, if such critical encounters are perceived to be an indicator of discord rather than concern, then frequent criticism may dissuade a parent from naming the child as DPAHC. Unfortunately, our data do not capture a parent's interpretation of their child's motivation for being critical; however, we can explore whether such critical exchanges increase or reduce the odds of both ACP and specific DPAHC appointments.

All analyses are adjusted for demographic (i.e., sex, number of children), SES (i.e., education, income), and health (i.e., self-rated health, depressive symptoms, hospitalizations) characteristics to account for potentially spurious associations between relationship quality and ACP. Prior studies reveal that these background characteristics are associated with both family relationship quality in later life (Silverstein & Giarrusso, 2010) and ACP (Carr & Khodyakov, 2007). We also adjust for the quality of relationships with friends and more distant family members; these other sources of support may be compensatory and may encourage ACP even if one's relationships with spouse and children are problematic.

Methods

Participants

The WLS is a random sample survey of 10,317 men and women who graduated from Wisconsin high schools in 1957. Among the 9,025 graduates still living in 2004, 7,265 (80.5%) completed the 2004 telephone interview. Topical modules were administered to randomly selected subsamples, to limit the overall length of the survey. Of the 7,265 participants, 5,106 persons (70.3%) were in the random subsample who received the ACP module and 4,477 (87.7%) returned the accompanying mail-back self-administered questionnaire. Nearly 90% (89.5%, n = 4,009) had at least one living child in 2003–2004, and roughly half of them (n = 1,896) were in the random 50% sample who received the parent–child relationship quality module. We dropped the 13 persons who failed to answer two of the three parent–child relationship items, yielding our final analytic sample size of 1,883. Of these persons, 1,560 were currently married and 323 were unmarried in 2004. Further information on the WLS, including data from prior waves, detailed response rates over time, and random selection into telephone survey modules is available at www.ssc.wisc.edu/wlsresearch/.

The WLS does not represent all strata of the U.S. population; ethnic minorities and high school dropouts are not represented. Our analytic sample includes parents only, due to the near universality of childbearing among members of the WLS sample. Only 2% of the participants were married and childless and 4% were unmarried and childless. These cell sizes are not sufficient for multivariate analysis. For members of the WLS cohort, nonmarital childbearing was exceedingly rare; thus, our "unmarried" parents are divorced, widowed, or separated.

Outcome Measures

End-of-life planning.—We consider both informal and formal aspects of planning. Informal planning was assessed with the question: "Have you discussed with anyone your plans about the types of medical treatment you want or don't want if you become seriously ill in the future?" Formal end-of-life planning was assessed with two questions: "Do you have a living will or an advance directive? These are written instructions about the type of medical treatment you would want to receive if you were unconscious or somehow unable to communicate" and "Have you made any legal arrangements for someone to make decisions about your medical care if you become unable to make those decisions yourself? This is sometimes called a Durable Power of Attorney for Health Care." We classified respondents into four mutually exclusive categories: *no preparations* (reference), *formal plans only* (living will and/or DPAHC), *informal plans only* (held discussion), and *two-pronged approach* (both discussion and living will and/or DPAHC). Only 6% of married parents and 5% of unmarried parents had formal plans only. We excluded these 23 cases from the multivariate analyses because the proportions were too small for adequately powered analyses, and formal preparations are generally deemed ineffective if not done in conjunction with discussions (Doukas & Hardwig, 2003).

DPAHC choice.—Participants who named a DPAHC also specified who had legal responsibility for the role. We classified them into one of three mutually exclusive categories: *appointed a spouse*, *appointed an adult child*, or *appointed another person*. "Other" persons included other family members and professionals, such as physicians and lawyers. Only 2% of married parents appointed someone other than a spouse or child; this proportion is too small for logistic regression analysis so they were excluded from our regression models.

Family Relationship Quality

Marital satisfaction.—Married persons answered six questions from the Marital Satisfaction Questionnaire for Older Persons (Haynes et al., 1992):

> How satisfied are you with: the day-to-day support and encouragement provided by your spouse; your spouse's overall personality; the amount of consideration shown by your spouse; the way disagreements are settled; how decisions are made in your marriage; and how well your spouse listens to you?

Response options range from 1 (*very dissatisfied*) to 6 (*very satisfied*) and confirmatory factor analysis indicated that items loaded on a single factor. The scale was highly reliable ($\alpha = 0.95$). We averaged responses provided that participants answered at least half of the items; scores for participants who answered fewer than three items were imputed.

Emotional support and criticism from children.—Parent–child relationship quality items were drawn from the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Parents answered two questions about positive aspects of their relationships with their child(ren): "How much do(es) your child(ren) make you feel loved and cared for?" and "How much are they willing to listen when you need to talk about worries or problems?" Response options ranged from 1 (*not at all*) to 5 (*a great deal*). We averaged responses such that higher scores reflect more supportive relationships ($\alpha = 0.66$; $r = .53$, $p < .001$). Parents also answered the single negative item: "How much are they critical of what you do?" Response options ranged from 1 (*not at all*) to 5 (*a lot*). We squared and standardized all relationship quality scales to reduce skew.

Control Variables

Alternative sources of social support.—Three questions assessed positive and critical aspects of one's relationships with friends and relatives other than their spouse or children. These items used the same stems as the parent–child relations items. Additionally, study participants were asked whether they had "a friend outside your family with whom you can really share your private feelings and concerns." Responses were coded as yes or no (omitted category).

Health.—Participants rated their overall health as *fair/poor* versus *good/very good/excellent* (reference category). Participants also reported whether they had *one or more hospital stays* versus *none* (reference category) in the past year. The 20-item Center for Epidemiological Studies Depression scale ($\alpha = 0.88$) indicates the frequency of depressive symptoms in the week prior to interview (Radloff, 1977).

Sociodemographic characteristics.—We also control for *gender*, *marital duration* (in years), *marital status* (divorced/separated, widowed, married), *number of living children*, *education* (high school diploma, some college, or bachelor's degree or more), and *total annual household income* in 2004 (natural log, to reduce skew).

Missing Values

Complete data were provided by 92% of married and 92.3% of unmarried parents. The marital satisfaction items had the most missing data among married parents ($n = 42$; 2.7% of cases). The formal ACP measure was missing the most data among unmarried parents ($n = 10$; 3.1% of cases). We conducted multiple imputations by chained equations in the software package Stata 12.0. Results were nearly identical in supplementary analyses using listwise deletion. However, the analytic sample includes the imputed data as it reduces concerns about sample size and the potential biases imposed by dropping cases with item-specific missing data.

Analytic Strategy

First, we calculated descriptive statistics and conducted chi-square or *t* tests to assess significant differences between married and unmarried parents. Second, we used multinomial logistic regression models to evaluate the association of family relationship quality indicators with the probability of having (a) no end-of-life plans, (b) discussions only, and (c) both discussion and formal plans. Separate models were estimated for married and unmarried parents. We used binary logistic regression models to evaluate the associations of family relationship quality with the probability of naming an adult child versus a spouse as DPAHC (married parents), and naming an adult child versus another person as DPAHC (unmarried parents). All models controlled for other sources of social support, health, and demographic characteristics. The models for married parents also included marital satisfaction and duration, whereas the model for unmarried parents included marital status (i.e., divorced/separated vs. widowed).

Results

Descriptive Statistics

Descriptive statistics are presented in Table 1. Half of married and unmarried parents (54% and 51%, respectively) had completed both formal and informal end-of-life preparations. Informal discussions only were the second most common strategy (25% of married and 22% of unmarried parents), whereas no preparation was the third most common (20% of married and 21% of unmarried parents). Only 6% of married and 5% of unmarried parents had done formal planning only (i.e., living will and/or DPAHC without discussions); these cell sizes are not sufficient for multivariate analyses, so this category was omitted from our regression analyses. None of the marital status differences were statistically significant.

With regards to DPAHC appointments, 47% of married and 46% of unmarried parents had no DPAHC. Among married parents, 37% appointed their spouse. Unmarried parents were significantly more likely than married parents to appoint an adult child, 46% and 14%, respectively. Unmarried parents were significantly more likely to appoint another person: 8% of unmarried parents chose someone other than a child, whereas 2% of married parents chose someone other than a spouse or adult child. For married parents, the "other DPAHC" cell counts were not sufficient for multivariate regression and were omitted from the regression analyses.

Do Family Relations Affect ACP Strategy?

Multinomial and binary logistic regression results are summarized in Table 2. The multivariate models revealed statistically significant associations between relationship quality and ACP for married but not for unmarried parents. Among married parents (N = 1,455), greater marital satisfaction increased the odds of two-pronged ACP (OR = 1.17, $p < .05$). More frequent critical interactions with children were associated with reduced odds of informal discussions only (OR = 0.84, $p < .05$) and two-pronged preparations (OR = 0.80, $p < .01$) compared with those who had done neither. Among unmarried parents (N = 299), neither marital nor parent–child relationship quality was significantly associated with ACP. Widowed persons were more than twice as likely as their divorced counterparts to have done two-pronged ACP.

Does Relationship Quality Predict Specific DPAHC Appointments?

Our analyses provide partial support for the hypothesis that positive relations with a particular individual facilitate his or her appointment as DPAHC. Among married parents, greater marital satisfaction was associated with decreased odds of appointing a child (vs. a spouse) as DPAHC (OR = 0.83, $p < .05$). Emotional support from children increased the odds of appointing an adult child rather than the spouse as DPAHC (OR = 1.25, $p < .05$). Women and persons with more children also were more likely to name a child as DPAHC. Among unmarried parents, higher levels of emotional support from children were associated with increased odds of naming a child, rather than another person, as DPAHC (OR = 4.24, $p < .001$).

Table 1. Characteristics of Participants by Marital Status

	Married parents (N = 1,560)		Unmarried parents (N = 323)		
	%	N	%	N	
End-of-life planning					
No preparations	20	293	21	66	ns
Formal preparations only	6	85	5	17	ns
Discussion only	25	370	22	71	ns
Two-pronged approach	54	792	51	162	ns
DPAHC choice					
No DPAHC	47	717	46	144	ns
Appointed spouse	37	562	—	—	—
Appointed adult child	14	222	46	144	***
Appointed another person	2	34	8	25	***
	Mean (SD)		Mean (SD)		
Family relationship quality					
Marital satisfaction (1 = least; 6 = most)[a]	4.83 (0.97)		—		—
Emotional support from children (1 = least; 5 = most)[a]	4.41 (0.70)		4.38 (0.83)		ns
Criticism from children (1 = least; 5 = most)[a]	1.20 (0.26)		1.25 (0.28)		ns

Notes: DPAHC = durable power of attorney for health care.

Descriptive statistics are reported prior to multiple imputations. Means and standard deviations are presented for continuous measures; percentages and cell sizes are shown for categorical measures. Chi-square tests (for categorical measures) and t tests (for continuous measures) were conducted to assess statistically significant differences between married and unmarried parents, where *ns* = not statistically significant.

[a]Descriptive statistics reported prior to correction for skew and standardization.

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 2. Logistic Regressions, Factors Associated with End-of-Life Planning and Durable Power of Attorney for Health Care (DPAHC) Choice

	Informal discussions only vs. no preparations	Two-pronged approach vs. no preparations	Adult child DPAHC vs. spouse
	OR (95% *CI*)	*OR* (95% *CI*)	*OR* (95% *CI*)
Married parents			
Marital satisfaction[a]	1.09 (0.92–1.30)	1.17* (1.01–1.37)	0.83* (0.69–0.99)
Emotional support from children[a]	1.00 (0.85–1.19)	1.07 (0.92–1.24)	1.25* (1.03–1.53)
Criticism from children[a]	0.84* (0.72–0.98)	0.80** (0.69–0.92)	1.11 (0.93–1.34)
Number of children	0.95 (0.85–1.06)	0.95 (0.85–1.06)	1.24*** (1.10–1.40)
Female	0.98 (0.69–1.40)	0.98 (0.69–1.40)	1.59* (1.08–2.35)
N	1,455		784
F; df	2.6; 30		4.5; 15
	Informal discussions only vs. no preparations	Two-pronged approach vs. no preparations	Adult child DPAHC vs. other
	OR (95% *CI*)	*OR* (95% *CI*)	*OR* (95% *CI*)
Unmarried parents			
Emotional support from children[a]	1.21 (0.86–1.71)	1.16 (0.87–1.55)	4.24*** (2.13–8.42)
Criticism from children[a]	1.22 (0.83–1.78)	1.19 (0.85–1.67)	1.61 (0.88–2.93)
Widowed (vs. divorced)	1.57 (0.72–3.45)	2.21* (1.11–4.41)	2.08 (0.63–6.86)
Number of children	1.00 (0.78–1.29)	0.83 (0.66–1.03)	1.14 (0.74–1.73)
Female	0.81 (0.35–1.86)	0.88 (0.43–1.82)	1.28 (0.39–4.18)
N	299		169
F; df	1.3; 28		1.8; 14

Notes: DPAHC = durable power of attorney for health care.
Regressions control for alternative sources of social support, health, educational attainment, household income (logged), and marital duration (married parents only).
[a]This measure is standardized (i.e., mean of 0, *SD* of 1).
*$p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

Drawing upon social support and control frameworks, we investigated the role of marital quality and parent–child relationship quality in the ACP process. Three key findings emerged. First, higher quality relationships with a family member increase the odds that that particular person is selected as DPAHC. Married parents with greater marital satisfaction are more likely to name their spouse (relative to an adult child), and both married and unmarried parents with supportive parent–child relationships are more likely to name a child (relative to naming another person) as their DPAHC. Positive relationships, whether marital or parent–child, may facilitate the selection of a loved one as DPAHC because the action is intended to preserve the patient's well-being, maximize the chances that the patient's views are accurately represented, and minimize decision-making stress and family-level conflicts surrounding end-of-life care (Kehl et al., 2009). These results are broadly consistent with social support and control models, which propose that higher quality relationships facilitate protective health behaviors.

Second, greater marital satisfaction increased, whereas more criticism from children decreased the odds of ACP among married parents. These findings are consistent with core themes of social support and control perspectives: positive relationships may motivate or even spur on one's ACP. Among married persons, a close and communicative relationship may encourage the couple to do ACP together. For unmarried parents, however, the quality of the relationship with their children did not play a similar role. Parent–child relationships in later life may vary based on the parent's marital status (Silverstein & Giarrusso, 2010); the types of criticisms children level against their parents, in particular, may vary based on whether the children have only one surviving parent. Future studies should delve more fully into the meaning and impact on ACP of parent–child relations among older widowed, divorced, and married persons. Future studies also should explore whether strong relationships with one family member compensate for poor relations with another. In supplementary analyses, we evaluated two-way interaction terms between marital quality and both positive and negative parent–child relations. Although neither interaction term was statistically significant, we suspect that family dynamics reflecting multiple dyadic relationships may affect some aspects of ACP.

Third, among married persons, women and persons with a greater number of children are more likely than their counterparts to name a child as DPAHC. The former may reflect the fact that women anticipate that they will outlive their husbands, and as such must rely on children as their decision makers. Persons with a greater number of children have a greater number of options for selecting a child who possesses the skills, temperament, and knowledge necessary to represent their parent's preferences at the end of life. Widowed persons also are significantly more likely than their

divorced counterparts to do ACP, perhaps reflecting their direct exposure to death and familiarity with end-of-life concerns.

Limitations and Future Directions

Our study has several limitations. First, the WLS represents a single cohort of white, high school educated adults in their early 60s, 68% of whom currently reside in Wisconsin. As such, they evidenced a higher rate of advance directive completion than researchers have documented in more diverse community-based samples (Hopp, 2000; although see Silveira et al., 2010). The WLS respondents also are relatively young and healthy, thus end-of-life issues may not yet be wholly salient to them and their family members; some studies show that older, chronically ill adults are most likely to make end-of-life preparations (Kahana et al., 2004). The WLS participants, by contrast, were quite healthy; just 12% had been admitted to a hospital in the year prior to interview. Future studies should investigate cohort, age, ethnic, and SES differences in the ACP process (Kwak & Haley, 2005). We especially look forward to studies of ACP among those who may be most vulnerable to problematic or costly end-of-life care, including unmarried and/or childless persons who may not have a close relative to advocate for them at the end of life, as well as the very small proportion of persons who engaged in formal ACP only. Problematic family dynamics may prompt such individuals to complete an advance directive without having meaningful discussions with kin about these plans.

Second, assessments of parent–child interactions did not specify a target child but rather asked about "your children." Thus, we cannot ascertain whether the respondent was referring to the child with whom he or she is closest, most distant, or an average across all children. Further, the study participants may not have thought about the same child when responding to questions about relationship quality and DPAHC appointments. Finally, our measures of family relationships were limited in several ways. We obtained family relationship appraisals from a single reporter only, and thus have a one-sided appraisal. Ideally, measures would be available from both the primary respondent and close family members. Further, we do not discern whether "children" include step- and biological children, the geographic distance between parent and child(ren), and other nuanced aspects of parent–child relations that may affect the child's engagement in the parent's ACP.

Conclusion

ACP is an important step toward the receipt of patient-centered, cost-effective end-of-life care, yet planning remains far from universal, even among older adults (Carr & Khodyakov, 2007; Silveira et al., 2010). We find that although high-quality family relationships can encourage older adults' use of effective ACP strategies; we also show that older adults whose relationships are marked by criticism may avoid the process all together. Health care providers who take patients' health histories should consider adding a brief set of questions assessing both positive and negative aspects of one's relationships with spouse and children, as these relationships may either enhance or constrain effective ACP and also guide the selection of the most (or least) appropriate DPAHC. Although ACP historically has been conceptually as a "patient-centered" practice, our results suggest that it is perhaps better conceptualized as a family-centered behavior, and its efficacy may be shaped by the quality of one's relationship dynamics.

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Correspondence

Correspondence should be addressed to Deborah Carr, PhD, Department of Sociology, Institute for Health, Health Care Policy and Aging Research, Rutgers University, 112 Paterson Street, New Brunswick, NJ 08901. E-mail: carrds@rutgers.edu.

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