The Role of Relationship Biography in Advance Care Planning

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Article

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Abstract

Objective: We examine the ways that romantic relationship biographies are related to whether, how, and with whom individuals complete advance care planning (ACP), preparations for end-of-life medical care. **Method:** Data are from an Internet survey of 2,144 adults aged 18 to 64, all of whom were either married to or cohabiting with an opposite-sex partner. **Results:** Cohabitors were less likely than married people to complete ACP. Relationship quality was an important influence on ACP, but did not account for the differences between married and cohabiting persons. Differences were largely explained by the age composition of the groups. **Discussion:** Couples who foresee a long and stable future together are those most likely to engage in end-of-life planning, a preventative health behavior with long-term consequences for well-being.

Keywords

cohabitation, commitment, health behaviors, medical decision making, multilevel models

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Mounting research compares the health and health behaviors of legally married and cohabiting persons (Carr & Springer, 2010). This is an important line of inquiry, given that 6% of adults in the United States are currently cohabiting with a romantic partner, and 48% of first unions are cohabitations (Copen, Daniels, & Mosher, 2013). Studies generally concur that married persons have better overall physical health, fewer depressive symptoms, lower mortality risk, and lower rates of substance use compared with their cohabiting counterparts (e.g., Duncan, Wilkerson, & England, 2006; Koskinen, Joutsenniemi, Martelin, & Martikainen, 2007).

Despite recent advances in distinguishing the effects of marriage versus cohabitation on health and health behaviors, several important issues remain unexplored. First, most studies conduct broad comparisons of currently married and cohabiting persons, without attention to relationship biographies: the relationship histories that preceded one's current status and the intentions one has for the future. Attention to relationship biographies may reveal important sources of variation in the health and health behaviors of married versus cohabiting persons (Hughes & Waite, 2009). Second, most studies focus on risky health behaviors that may carry short-term negative consequences, such as current binge drinking (Duncan et al., 2006), rather than behaviors with longer term implications for well-being. An evaluation of positive health behaviors with potential benefits realized in later life may provide further insights into the ways that social relationships protect health over the life course.

The formation and articulation of one's preferences for end-of-life medical care is an important preventative health behavior for adults of all ages (Sudore & Fried, 2010). Advance care planning (ACP) upholds patients' medical decision-making autonomy; 70% of dying persons faced with a medical decision lack the cognitive capacity necessary to make such a choice (Silveira, Kim, & Langa, 2010). Thus, ACP may ultimately protect dying persons from excessive pain, suffering, and unwanted or futile treatments that compromise well-being at the end of life. Recent work reveals that ACP is typically a family or couple-level effort, rather than an individual endeavor. Most married adults name their spouse as their proxy decision maker (Carr & Khodyakov, 2007), especially in high-quality marriages (Boerner, Carr, & Moorman, 2013; Carr, Moorman, & Boerner, 2013). Despite the important role of romantic partners in the ACP process, we know of no studies that examine whether married versus cohabiting status or relationship biographies influence ACP among adults in the United States.

Recognizing this gap, we have two research aims. First, we examine the extent to which relationship biographies are related to whether, how, and with whom currently married and cohabiting persons make plans for their end-of-life medical care. Second, we evaluate the extent to which associations

between relationship biographies and ACP are due to (a) relationship quality, (b) age, or (c) the social composition of the relationship groups. We analyze data from a sample of 2,144 adults aged 18 to 64, all of whom were either married to or cohabiting with an opposite-sex partner.

ACP in the United States

ACP encompasses strategies that allow individuals to convey their end-of-life health care preferences to family and health care providers, while still cognitively intact. ACP typically involves completing an advance directive, which has two components: a living will detailing the specific treatments a person would or would not want if terminally ill and a durable power of attorney for health care (DPAHC) designation appointing someone to make medical decisions on behalf of an incapacitated patient. Practitioners also encourage patients to discuss their preferences with significant others and care providers. Although such discussions are informal (i.e., not legally binding), they may help patients clarify and communicate their specific treatment preferences and general values to the persons who may represent them in the formal decision-making process (Wright et al., 2008). As such, researchers and practitioners concur that a two-pronged approach to ACP that encompasses both formal and informal components is more effective than advance directive completion alone (Carr & Khodyakov, 2007).

Nearly half (43%) of all dying persons are faced with a medical treatment decision during their final days of life, a period in which more than half of all patients experience pain, breathlessness, and fatigue, and substantial minorities suffer from severe cognitive impairment, anxiety, depression, insomnia, and nausea (Silveira et al., 2010; Solano, Gomes, & Higginson, 2006). Decisions regarding treatments that might improve or preserve well-being often fall on family members, typically spouses (Carr & Khodyakov, 2007). The role of proxy decision maker is often fraught with difficult challenges, including lack of knowledge about the patient's preferences, family conflict, and emotional distress related to making life-or-death decisions (Buckey & Molina, 2012).

Although practitioners and policy makers encourage ACP to enhance the quality of the dying experience for both patients and family members (e.g., Agency for Healthcare Research and Quality, 2003), national rates are modest, especially among relatively healthy working-age adults. Studies focused on the U.S. population aged 18 to 64 consistently show that fewer than one third have completed ACP (Moorman & Inoue, 2013). Practitioners generally concur that ACP begun in later life is often "too late" to be helpful or meaningful, because ACP is a behavior ideally performed over time, and in stages

that require repetition, revision, and communication (Sudore et al., 2008). Thus, it is important to identify enhancements and obstacles to ACP among young and midlife adults (Schickedanz et al., 2009).

Marital Status, Relationship Biographies, and ACP

Marital status is a well-established correlate of completing ACP. Married persons are more likely than their never- and formerly married counterparts to have made formal preparations for their end-of-life care (Carr & Khodyakov, 2007), with happily married people more likely to do so than those in less satisfying marriages (Boerner et al., 2013; Carr et al., 2013). How cohabitors compare with married persons is unknown. Cohabitation poses a puzzle for the study of health and health disparities, more generally. Cohabiting relationships may provide many of the same health-buffering benefits as marriage, including sexual intimacy, social and emotional support, coresidence, and at least some level of economic cooperation and sharing of household chores (Carr & Springer, 2010). Nevertheless, empirical studies in the United States consistently show that cohabitors have poorer quality health and health behaviors than their legally married counterparts (e.g., Koskinen et al., 2007).

However, most prior work compares the broad categories of married and cohabiting, without considering important sources of within-category heterogeneity. Cohabitors may include those who are engaged to be married as well as those who view their partnership as temporary and non-permanent, hope to ultimately marry but lack the economic or social resources to do so at present, and view cohabitation as a long-term, stable alternative to marriage (Brown & Kawamura, 2010; Smock, Manning, & Porter, 2005). Married couples also vary on important dimensions; for example, those who cohabited prior to marriage versus those who did not (Stanley, Rhoades, Amato, Markman, & Johnson, 2010). Such differences in relationship history and future intentions may influence ACP, because ACP is a behavior that one begins years, if not decades, prior to the time one's preferences are enacted. As such, persons who envision a long future together with their current partner (i.e., "till death do us part") may be more likely to engage in ACP, compared with those who see their current relationship as time-limited.

Recognizing this heterogeneity, we evaluate relationship histories and intentions, which we conceptualize as indicators of commitment in a relationship. Commitment involves a long-term orientation toward the relationship, and the intention or motivation to persist with the relationship (Stanley, Whitton, & Markman, 2004). Elements of one's relationship biography may signify a person's level of commitment to a long-term future together, including end-of-life planning with one's partner. Current marital status is one

element of relationship biography, with marriages being more permanent and committed, on average, than cohabitations (Copen et al., 2013). However, marital status is an incomplete measure of commitment, given that some cohabitations will become marriages in the future.

Thus, our measures include two additional elements of relationship biography. For cohabitors, we consider intentions to marry. Couples who intend to marry eventually, even if they cannot or do not plan to marry in the immediate future, may be more committed than couples who intend to break up or to remain together unmarried (Jose, O'Leary, & Moyer, 2010). For married persons, we consider cohabitation with one's spouse prior to marriage. Some research indicates that marriages preceded by cohabitation are less stable than marriages entered directly (Stanley et al., 2010).

The Role of Relationship Quality

Our overarching hypothesis is that persons in more stable relationships, including married persons and cohabitors who intend to marry, will be most likely to engage in ACP, whereas those in less stable relationships (cohabitors with no plans to marry) will be least likely to do so. This association between relationship biographies and ACP completion may be due to interpersonal processes within the relationship, such as relationship quality. Relationship quality represents a subjective, "want to" dimension of commitment (Stanley et al., 2010); individuals in high-quality relationships are motivated to stay together for the long term.

Research consistently reveals that cohabitors report lower relationship satisfaction compared with their married counterparts (Rhoades, Stanley, & Markman, 2009). Among cohabitors, those who report lower levels of happiness and higher levels of conflict are less likely to transition into marriage (Brown, 2004). In turn, relationship quality is associated with ACP, because ACP tends to be a practice in which highly functioning families engage. Studies examining both healthy and ill older adults find that marital quality promotes ACP (Boerner et al., 2013; Carr et al., 2013).

The Role of Age

Alternately, the association between relationship biographies and ACP completion may be due to age, which represents advancement through one's relationship biography. As age increases, one's cumulative likelihood or "risk" of marrying increases and then plateaus (Goldstein & Kenney, 2001). Age is among the most powerful predictors of ACP: Net of health status, the older a person is, the more likely he or she is to have completed ACP (Moorman &

Inoue, 2013). Thus, if age accounts for low rates of planning among cohabiting persons, then at least some of the disparity will resolve over the life course: Some young cohabitors will eventually marry, and that stable, long-term relationship may facilitate ACP.

The Role of Group Composition

We hypothesize that an observed statistical association between relationship biographies and ACP completion may be partly due to one's commitment to and quality of the relationship, and to one's age or progression through a relationship biography. However, the statistical association may be due to a selection effect if confounding factors are associated with both relationship biographies and with ACP completion. Prior work has found that both ACP and relationship biographies are correlated with a variety of individual-level and couple-level factors.

Individual-level factors, including health status, educational attainment, and race/ethnicity, are associated with both ACP and relationship biographies. Poor health exposes individuals to opportunities to plan for end-of-life in the health care system, and also prompts people to think about their care preferences (Schickedanz et al., 2009). Health status is also associated with relationship biography; healthier persons are more likely to marry (Waldron, Hughes, & Brooks, 1996).

Race/ethnicity and educational attainment also are well-documented correlates of ACP. Blacks and Latinos (Carr, 2011) and people with low levels of education (Carr, 2012), are significantly less likely than Whites and higher socioeconomic status (SES) persons, respectively, to engage in ACP. With regard to relationship biography, members of disadvantaged groups, including African Americans, Latinos, and those with low levels of education, may face obstacles to the formation of long-term committed relationships. Partly due to educational disadvantage, Blacks and Latinos are less likely than Whites to transition from cohabitation to marriage (Smock & Manning, 2004).

Couple-level factors, including parental status, household income, home ownership, and relationship duration, are also associated with both ACP and relationship biography. First, parenthood is a well-documented correlate of ACP, as parents seek to protect their children from difficult end-of-life decisions (Carr & Khodyakov, 2007). Although legal marriage and parenting are becoming increasingly decoupled, childbearing remains more common among married than cohabiting couples (Kennedy & Bumpass, 2008), and cohabitors are more likely to have children with partners they intend to marry (Sassler, Miller, & Favinger, 2008). Second, economic instability is a significant barrier to ACP (Carr, 2012), as well as a major reason why cohabiting couples do not

form plans to marry (Smock et al., 2005). Furthermore, persons who own property are likely to complete ACP at the same time that they complete a financial will (Carr, 2012). Finally, insofar as relationship duration is associated with age, we expect it to be an important couple-level factor.

Method

Data

Data are from an internet survey conducted between July and October of 2010 by Knowledge Networks, in conjunction with the National Center for Family and Marriage Research at Bowling Green State University. This cross-sectional study included a sample of 2,150 participants ages 18 to 64 who belonged to one of 1,075 married or cohabiting heterosexual couples residing in the United States. Seventy percent of the couples were married (n = 752 couples) and 30% were cohabiting (n = 323 couples).

Knowledge Networks used three methods to recruit participants into the study. First, online advertisements yielded 57% of the cohabiting couples (n = 184 couples). This is a non-probability subsample, and response rates are not calculable for convenience samples.

Second, a research panel representative of the U.S. population yielded 33% of the cohabiting couples (n = 108 couples) and all of the married couples (n = 752). Knowledge Networks established the panel in 1999, and panel members agreed to participate in multiple Internet surveys over time in exchange for "incentive points" redeemable for cash. If panel members did not have access to the Internet, Knowledge Networks provided the necessary equipment free of charge. Recruitment within the panel yielded a 50% response from married couples and a 41% response from cohabiting couples. These response rates are consistent with those of other probability-based samples that include dyads rather than individuals (Kalmijn & Liefbroer, 2011; Young & Johnson, 2013).

Third, 10% of cohabiting couples (n = 31 couples) were composed of a Knowledge Panel member and partner who was not on the panel. This strategy yielded a 5% response rate.

The three groups of cohabitors (i.e., convenience sample, both recruited from the panel, one recruited from the panel) displayed different end-of-life planning choices, and differed on age, income, home ownership, and relationship duration. Convenience sample couples were significantly less likely to have end-of-life plans than partners both recruited from the panel, and they were younger and earned less income than partners both recruited from the panel. Couples in which one partner was on the panel were most likely to be

homeowners. Couples in which both partners were recruited from the panel were in longer relationships than couples in the other two groups. The three groups were similar on all other study variables, and so we pooled them in the analyses. A table displaying the characteristics of cohabitors by recruitment method is available in the appendix.

The three methods of recruitment raise questions about the extent to which the sample of cohabitors is representative of opposite-sex cohabiting couples nationwide. A comparison with Census Bureau figures from 2012 indicates that the sample is similar to national figures in terms of age, race/ethnicity, proportion with children, and income (Vespa, Lewis, & Kreider, 2013). The sample is, however, somewhat better educated than average, with a larger proportion of the sample having some college education than the proportion among opposite-sex cohabitors nationwide.

Dependent Measures

ACP. We consider two aspects of ACP: formal legal preparations and informal discussions. Formal end-of-life planning was assessed with two questions. Participants were asked "Do you have a living will or 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." 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?" We classified respondents into four mutually exclusive categories: *no preparations* (reference), *formal only* (living will and/or DPAHC), *informal only* (discussion), or *both formal and informal*.

DPAHC choice. Participants who named a DPAHC specified who had legal responsibility for the role. We classified respondents into three mutually exclusive categories: *no DPAHC* (reference), *spouse/partner*, or *other person*. No single type of "other" person was named with sufficient frequency to warrant a separate outcome category.

Relationship Biographies

We created four mutually exclusive *relationship biographies* based on a couple's current legal arrangement (i.e., married vs. cohabiting) and their answers

to the questions "Did you live with your spouse before you got married?" and "Now that you are living together, have you and your partner agreed to get married in the future?" The former question was asked of currently married persons, and the latter question was asked of cohabitors. Married individuals were divided into those who had not cohabited with their spouse before marriage ($n = 738$) and those who had ($n = 760$). Cohabiting persons were divided into those who had no plans to marry their partner ($n = 326$) and those who did ($n = 320$).

Three married couples (i.e., 6 participants) who declined to report whether they had cohabited before marriage were dropped from analyses. Twenty-eight married couples' reports differed on whether they had cohabited before their marriage, and 24 cohabiting couples' reports differed on whether they had plans to marry. Sensitivity analyses showed that disagreement on relationship biography was not associated with either ACP or DPAHC choice, and so these cases were retained.

Relationship Quality

Perceived quality was assessed with five items: (a) Taking all things together, how satisfied are you with your relationship with your spouse or partner? (b) How satisfied are you with how well your spouse/partner listens to you? (c) My spouse/partner shows love and affection toward me; (d) My spouse/partner encourages me to do things that are important to me; and (e) My spouse/partner listens when I need someone to talk to. Response categories ranged from 1 (*very dissatisfied*/*strongly disagree*) to 5 (*very satisfied*/*strongly agree*). The responses of participants who answered all five items were summed to create a scale with a possible range of 5 to 25 where higher values indicated better perceived quality ($\alpha = .88$). The observed range was not normally distributed, and so scores were bottom-coded at 18.

Age and Compositional Factors

Age was a continuous variable ranging from 18 to 64 years. Individual-level compositional factors included health status, educational attainment, and race/ethnicity. For *self-reported health*, participants were asked "In general, would you say your health is excellent, very good, good, fair, or poor?" The data showed skewed responses; 89.5% of respondents reported that their health was excellent, very good, or good. Therefore, we dichotomized this variable coding *fair* and *poor* as 1 and *good, very good*, and *excellent* as 0. *Educational attainment* included three categories: *high school or less*

(reference category), *some college education*, and *bachelor's degree or higher*. *Race/ethnicity* had four categories: *White non-Hispanic* (reference group), *Black non-Hispanic, Hispanic*, and *Other race/ethnicity*. The "Other race/ethnicity" category included respondents who reported belonging to two or more racial/ethnic categories.

Couple-level compositional factors included presence of children, household income, home ownership, and relationship duration. In the few cases in which partners' reports disagreed, we used the woman's report. Results did not differ if the man's report was used. *Presence of children* referred to the number of persons in the household who were under the age of 18 and were biological children of both study partners. (The study did not include information on other types of children.) This measure was dichotomized into the categories *no children* (reference) versus *any children* because 53% of married participants and 76% of cohabiting participants had no mutual biological children in the household. *Total household income* was an ordinal variable with 19 categories; the smallest category was "*less than $5,000*," and the largest category was "*$175,000 or more*." *Home ownership* was a dichotomous variable that included the categories *rents current residence* (reference) and *owns current residence. Relationship duration* referred to the number of years that had passed since the couple had begun dating. We use this indicator because it is more comparable across married persons and cohabitors than other markers of time spent together, such as the date of marriage or the date cohabitation began.

Analytic Strategy

We first performed one-way analysis of variance tests to compare the four relationship biographies on all study measures. Second, we tested a series of multilevel multinomial logistic regressions predicting ACP strategies, with "no plans" and "no DPAHC" serving as the reference groups. The two outcomes were modeled similarly. Relationship biographies were the sole independent measures in Model 1. Model 2 added relationship quality to Model 1. Model 3 added age to Model 2. Model 4 included all individual-level and couple-level compositional factors and gender.

A random intercept accounted for the clustered, non-independent structure of the data, where individuals were nested within couples. Presence of children, household income, home ownership, and relationship duration were modeled as level-two fixed effects (i.e., common to both partners), while all other measures were modeled as level-one fixed effects (i.e., allowed to differ between partners). The majority of study respondents (90.4%) answered all

relevant survey items. Relationship duration was the variable missing the most observations at 78 (3.6%). Listwise deletion was performed; this strategy is acceptable for handling small amounts of missing data in dyadic samples (Young & Johnson, 2013).

Results

Relationship Biographies and ACP: Bivariate Analysis

Descriptive statistics for all variables used in the analysis are presented in Table 1. Approaches to ACP differed by relationship biography. Nearly half (49%) of both cohabitors with plans to marry and cohabitors without plans to marry had no ACPs. They were significantly more likely to lack plans than either of the married groups; approximately a third of each of the married groups had no plans. Formal plans alone were uncommon among all groups, but most common among married persons who had not cohabited with their partner before marriage (7%) and least common among cohabitors with no plans to marry (1%). The four groups did not differ significantly in their rates of having informal plans only. In both married groups, 28% had both formal and informal plans. They were significantly more likely than cohabitors with plans to marry (17%) and cohabitors without plans to marry (20%) to have followed this two-pronged approach.

Only a minority of persons in all four groups had appointed a DPAHC, but DPAHCs were especially uncommon among cohabitors. Eighty and Eighty-two percent of cohabitors with and without plans to marry, respectively, had no DPAHC. Comparatively, 69% of those who had married without cohabiting and 71% of those who had cohabited before married lacked a DPAHC. Spouse appointments were most common among the married persons. About a quarter (26%) of each married group had appointed their partner, compared with only 14% of cohabitors with plans to marry and 8% of cohabitors without plans to marry. Cohabitors without marriage plans were the group most likely to appoint someone other than their romantic partner as DPAHC, with 11% of the group doing so. In comparison, only 3% to 5% of married persons appointed someone other than their spouse as their DPAHC.

Relationship Biographies, Relationship Quality, Age, and ACP

The results presented in Table 2 show the association between relationship biographies and ACP (Model 1) and the effects of adjusting for relationship

Table 1. Characteristics of Participants in the Knowledge Networks Study, 2010 (N = 2,144).

	Married, did not cohabit (n = 738)[a]	Married, did cohabit (n = 760)[b]	Cohabiting with plans to marry (n = 326)[c]	Cohabiting with no plans to marry (n = 320)[d]	Significant subgroup differences
	M (SD) or %	M (SD) or %	M (SD) or %	M (SD) or %	
End-of-life planning					
No plans	33	33	49	49	ac, ad, bc, bd
Formal plans only	7	4	6	1	ad
Informal plans only	33	34	28	30	
Both types of plan	28	28	17	20	ac, bc, bd
DPAHC appointment					
None	69	71	80	82	ac, ad, bc, bd
Spouse/partner	26	26	14	8	ac, ad, bc, bd
Other person	5	3	6	11	ad, bd
Relationship quality					
Perceived quality (18 = *low* to 25 = *high*)	22.31 (2.40)	22.13 (2.46)	22.19 (2.42)	21.18 (2.50)	ad, bd, cd
Age					
Age (years)	47.30 (10.83)	43.46 (10.57)	34.08 (11.44)	41.72 (12.79)	ab, ac, ad, bc, cd
Compositional factors					
Fair or poor health	8	11	10	15	ad
High school or less	26	31	28	28	
Some college	30	34	48	46	ac, ad, bc, bd
College degree/more	43	35	25	26	ab, ac, ad, bc, bd

(continued)

Table 1. (continued)

	Married, did not cohabit (n = 738)[a]	Married, did cohabit (n = 760)[b]	Cohabiting with plans to marry (n = 326)[c]	Cohabiting with no plans to marry (n = 320)[d]	Significant subgroup differences
	M (*SD*) or %	*M* (*SD*) or %	*M* (*SD*) or %	*M* (*SD*) or %	
White	85	84	65	78	ac, bc, cd
Black	1	3	15	8	ac, ad, bc, bd, cd
Hispanic	7	7	13	7	ac, bc, cd
Other race/ethnicity	7	6	7	8	
Any biological children, current union	47	48	30	18	ac, ad, bc, bd, cd
Total household income (1 = *less than $5,000* to 19 = *$175,000 or more*)	13.66 (2.99)	12.98 (3.80)	10.77 (4.06)	10.97 (4.29)	ab, ac, ad, bc, bd
Owns residence	88	82	46	56	ab, ac, ad, bc, bd, cd
Relationship duration (years)	25.02 (12.16)	17.84 (9.60)	6.66 (6.44)	9.76 (10.10)	ab, ac, ad, bc, bd, cd
Control measure					
Female	50	50	50	50	

Note. One-way analysis of variance (ANOVA) tests were conducted to assess differences among the four relationship biographies. DPAHC = durable power of attorney for health care; ab = married, did not cohabit vs. married, did cohabit; ac = married, did not cohabit vs. cohabiting with plans to marry; ad = married, did not cohabit vs. cohabiting with no plans to marry; bc = married, did cohabit vs. cohabiting with plans to marry; bd = married, did cohabit vs. cohabiting with no plans to marry; cd = cohabiting with plans to marry vs. cohabiting with no plans to marry;.

Table 2. Summary of Key Results From Intermediate Stepwise Multilevel Multinomial Regression Models.

	Formal plans only (*n* = 95)	Informal plans only (*n* = 632)	Both formal and informal plans (*n* = 494)	Spouse/partner (*n* = 430)	Other person (*n* = 102)
	vs. No plans (*n* = 722)			vs. None (*n* = 1,426)	
	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]
Model 1 (all independent measures shown)					
Married, did cohabit[a]	0.72 [0.38, 1.36]	1.15 [0.71, 1.86]	1.05 [0.64, 1.71]	0.68 [0.33, 1.40]	0.39* [0.16, 0.95]
Cohabiting with plans to marry[a]	0.35** [0.15, 0.79]	0.37** [0.20, 0.70]	0.29*** [0.15, 0.56]	0.27** [0.10, 0.73]	0.60 [0.20, 1.80]
Cohabiting with no plans to marry[a]	0.04*** [0.01, 0.20]	0.38** [0.20, 0.73]	0.26*** [0.13, 0.51]	0.07*** [0.02, 0.21]	0.56 [0.19, 1.67]
Model 2 (adds relationship quality to Model 1)					
Married, did cohabit[a]	0.73 [0.39, 1.37]	1.16 [0.73, 1.86]	1.07 [0.66, 1.72]	0.71 [0.35, 1.44]	0.40* [0.16, 0.96]
Cohabiting with plans to marry[a]	0.36** [0.16, 0.81]	0.39** [0.21, 0.71]	0.31*** [0.16, 0.58]	0.29** [0.11, 0.77]	0.63 [0.22, 1.86]
Cohabiting with no plans to marry[a]	0.05*** [0.01, 0.24]	0.43** [0.22, 0.80]	0.32*** [0.16, 0.51]	0.09*** [0.03, 0.25]	0.64 [0.22, 1.86]
Model 3 (adds age to Model 2)					
Married, did cohabit[a]	0.91 [0.49, 1.69]	1.36 [0.86, 2.15]	0.46 [0.92, 2.33]	1.00 [0.50, 1.98]	0.54 [0.23, 1.28]
Cohabiting with plans to marry[a]	0.75 [0.32, 1.72]	0.68 [0.36, 1.25]	0.82 [0.43, 1.56]	0.83 [0.31, 2.23]	1.64 [0.55, 4.91]
Cohabiting with no plans to marry[a]	0.07*** [0.02, 0.32]	0.55 [0.30, 1.02]	0.46* [0.24, 0.87]	0.13*** [0.05, 0.38]	0.95 [0.33, 2.71]
n (Level 1)		1,943		1,958	
n (Level 2)		994		996	

[a]Married, did not cohabit is the reference category.
*$p < .05$. **$p < .01$. ***$p < .001$.

quality (Model 2) and age (Model 3). In Model 1, marital status was the element of relationship biography that stood out: Compared with married persons who had not previously cohabited, cohabitors of all types were significantly less likely to complete any ACP or to appoint their spouse or partner as DPAHC. Married persons who had cohabited before marriage did not differ significantly from married persons who had not cohabited before marriage. We detected only one significant difference in the odds of appointing a person other than spouse/partner as DPAHC: Married persons who cohabited before marriage were less likely to appoint another person as DPAHC than married persons who did not cohabit (OR = 0.39, $p < .05$). Overall, these models indicated that cohabitors are less likely than married persons to complete ACP.

Model 2 included relationship quality as a covariate. Accounting for relationship quality, cohabitors of both types remained significantly less likely than married persons to complete any ACP or to appoint their spouse or partner as DPAHC. Therefore, although relationship quality varied across relationship biographies, low relationship quality was not the reason why cohabitors had no ACPs.

Model 3 added age to Model 2. Age accounted for all of the differences between cohabitors with plans to marry and married persons who did not cohabit, and also for the difference in informal discussion between cohabitors without plans to marry and married persons who did not cohabit. However, cohabitors with no plans to marry remained less likely than married persons who did not cohabit to complete formal plans only (OR = 0.07, $p < .001$), to complete both formal and informal plans (OR = 0.46, $p < .05$), and to appoint a partner as DPAHC (OR = 0.13, $p < .001$). We note that age and relationship duration were strongly correlated ($r = .74$, $p < .001$), making these two factors difficult to disentangle.

Explaining the Association Between Relationship Biographies and ACP: Compositional Factors

Table 3 presents the models that included all compositional factors, Model 4. These models evaluated the possibility that the association between relationship biographies and ACP is due to selection effects, whereby the sociodemographic characteristics of persons in each category differed. Relative to married persons who did not cohabit, cohabitors with no plans to marry remained much less likely to have formal plans only (OR = 0.10, $p < .01$) and much less likely to appoint their partner as DPAHC (OR = 0.20, $p < .01$), but

Table 3. Results From Final Multilevel Multinomial Regression Models.

	Formal plans only (n = 95)	Informal plans only (n = 632)	Both formal and informal plans (n = 494)	Spouse/partner (n = 430)	Other person (n = 102)
		vs. No plans (n = 722)		vs. None (n = 1,426)	
	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]
Relationship biography					
Married, did cohabit[a]	0.96 [0.50, 1.86]	1.48 [0.92, 2.40]	1.67* [1.02, 2.76]	1.11 [0.56, 2.21]	0.68 [0.29, 1.63]
Cohabiting with plans to marry[a]	1.37 [0.50, 3.78]	1.08 [0.52, 2.26]	1.59 [0.74, 3.46]	1.68 [0.54, 5.20]	3.16 [0.88, 11.37]
Cohabiting with no plans to marry[a]	0.10** [0.02, 0.50]	0.79 [0.38, 1.64]	0.72 [0.33, 1.56]	0.20** [0.06, 0.66]	1.79 [0.53, 6.00]
Relationship quality					
Perceived quality (18 = *low* to 25 = *high*)	1.10 [0.98, 1.22]	1.11** [1.04, 1.20]	1.19*** [1.10, 1.29]	1.19*** [1.07, 1.32]	1.07 [0.94, 1.21]
Age					
Age in decades	2.92*** [1.98, 4.30]	1.48** [1.13, 1.94]	2.41*** [1.82, 3.20]	3.14*** [2.09, 4.70]	2.39*** [1.50, 3.80]
Compositional factors					
Fair or poor health	4.62*** [1.99, 10.77]	2.79*** [1.57, 4.96]	3.23*** [1.76, 5.94]	3.34** [1.59, 7.05]	0.76 [0.27, 2.17]
Some college[b]	1.26 [0.63, 2.51]	1.37 [0.91, 2.06]	1.37 [0.88, 2.13]	1.37 [0.77, 2.44]	0.88 [0.42, 1.82]
College degree/more[b]	2.42** [1.21, 4.86]	1.50 [0.94, 2.39]	2.40*** [1.48, 3.89]	2.37** [1.26, 4.45]	2.19* [1.02, 4.72]
Black[c]	0.37 [0.07, 1.91]	0.52 [0.21, 1.26]	0.71 [0.28, 1.81]	1.14 [0.30, 4.30]	1.30 [0.30, 5.65]
Hispanic[c]	1.09 [0.43, 2.75]	0.50* [0.26, 0.97]	0.47* [0.23, 0.98]	0.59 [0.23, 1.54]	1.65 [0.57, 4.77]
Other race/ethnicity[c]	2.20 [0.93, 5.17]	0.69 [0.34, 1.37]	1.08 [0.53, 2.19]	0.97 [0.38, 2.47]	1.85 [0.62, 5.48]
Any biological children, current union	3.17*** [1.66, 6.04]	1.36 [0.87, 2.12]	1.47 [0.92, 2.35]	2.19* [1.10, 4.34]	1.33 [0.59, 2.99]

(continued)

Table 3. (continued)

	Formal plans only (*n* = 95)	Informal plans only (*n* = 632)	Both formal and informal plans (*n* = 494)	Spouse/partner (*n* = 430)	Other person (*n* = 102)
		vs. No plans (*n* = 722)		vs. None (*n* = 1,426)	
	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]
Total household income (1 = *less than $5,000* to *19 = $175,000 or more*)	1.16** [1.06, 1.28]	1.05 [0.99, 1.12]	1.14*** [1.07, 1.22]	1.28*** [1.16, 1.42]	1.12 [1.00, 1.25]
Owns residence	0.81 [0.37, 1.77]	1.25 [0.73, 2.15]	1.08 [0.61, 1.91]	0.85 [0.36, 2.01]	0.79 [0.30, 2.05]
Relationship duration (years)	0.97 [0.93, 1.00]	1.01 [0.98, 1.03]	1.00 [0.97, 1.03]	0.98 [0.94, 1.02]	1.01 [0.97, 1.06]
Control measure					
Female	0.67 [0.41, 1.10]	1.25 [0.94, 1.65]	1.12 [0.83, 1.52]	0.93 [0.66, 1.31]	0.97 [0.59, 1.58]
n (Level 1)		1,943		1,958	
n (Level 2)		994		996	
Variance (*SD*) random intercept: null model		5.67 (0.89)		10.94 (1.74)	
Variance (*SD*) random intercept: full model		4.37 (0.75)		9.98 (1.59)	
df; deviance: null model		4; 4,577.79		3; 2,533.732	
df; deviance: full model		52; 4,275.03		35; 2,268.51	

[a]Currently married, did not cohabit is the reference category.
[b]High school or less is the reference category.
[c]White is the reference category.
*$p < .05$. **$p < .01$ ***$p < .001$.

the difference in the two-pronged approach became non-significant. Notably, in this model, married persons who did cohabit were more likely to complete both formal and informal ACP than were married persons who did not cohabit (OR = 1.67, $p < .05$).

Better relationship quality was associated with higher odds of informal discussion (OR = 1.11, $p < .01$), the two-pronged approach (OR = 1.19, $p < .001$), and appointment of a partner as DPAHC (OR = 1.19, $p < .001$). As anticipated, age was associated with higher odds of all types of planning. Consistent with prior research, poorer health, higher income, higher education, White non-Hispanic ethnicity, and the presence of children were associated with higher odds of ACP.

Discussion

Our study is the first to demonstrate that married persons' and cohabitors' relationship biographies are associated with whether, how, and with whom one engages in ACP. We found that ACP patterns varied based on one's current marital status, relationship history, and future intentions, with cohabitors less likely than married people to complete ACP. Our next aim was to evaluate potential explanations for the observed disparity. Although relationship quality was an important influence on ACP, it did not account for the differences between married and cohabiting persons. Instead, these differences were largely explained by cohabitors' younger age and shorter relationship duration relative to married persons. We conclude that health behaviors that have primarily long-term consequences for well-being (such as ACP) may be undertaken only by couples who foresee a long and stable future together.

Disparity in ACP: Importance and Explanations

Relationship biography has a modest influence on ACP. After accounting for relationship quality, age, and compositional differences, relationship biography has little relationship to ACP—with a few notable exceptions. First are the rarity of formal plans only and of appointing one's partner as DPAHC among cohabitors who do not intend to marry. These results suggest that one critical obstacle to ACP among cohabitors not committed to marriage may be the couple's reluctance or inability to envision a long future together (Stanley et al., 2004). Supplementary analyses showed that fully 90% of cohabitors who had no plans to marry said that the chances that their relationship will break up in the future were 50-50 or greater. Thus, this group

may be better described as "cohabiting with intent to break up," rather than "cohabiting no plans to marry." A long-term commitment to one's romantic partner may be a critical contributor to effective ACP, especially ACP that involves that partner.

Second, married couples who cohabited before marriage emerged as somewhat more likely than married couples who did not cohabit to complete a two-pronged approach to ACP. This result is surprising and unexpected, and should be replicated in other data sets before extensive interpretation. Our best speculation at present is that religiosity is a key omitted variable: Highly religious persons are unlikely to cohabit (Stanley et al., 2004) and unlikely to complete ACP (Garrido, Idler, Leventhal, & Carr, 2013).

High-quality relationships enhance ACP but do not explain marital status differences. Consistent with prior research, higher relationship quality was associated with higher rates of completion of ACP (Boerner et al., 2013; Carr et al., 2013). This effect appears to be broad and robust, given that the present sample is comprised of young and midlife adults who are quite healthy, whereas prior studies have examined older adults who were healthy (Carr et al., 2013) or very ill (Boerner et al., 2013). However, although in the bivariate, relationship quality was lowest among cohabitors with no plans to marry, it did not explain the greater propensity of married persons to plan.

Cohabitors are unlikely to complete ACP, primarily because they are young and their relationships are relatively new. Cohabitors had different sociodemographic characteristics than did married people, and these sociodemographic differences—rather than the lower quality of cohabitations relative to marriages—made cohabitors unlikely to plan. Cohabiting persons were younger than married persons, and correspondingly, they had not been in relationships for as many years. Clinicians suggest that a way to raise rates of ACP among younger persons is to identify the barriers that discourage them from beginning ACP (Schickedanz et al., 2009). The present study suggests that although relationship biographies are correlated with ACP behaviors, relationship biographies themselves are not a barrier to planning for young cohabitors, especially those who plan to marry.

Limitations

Our study is the first that we know of to explore the ways that relationship biographies are related to ACP. However, this study has several important limitations. First, although the sample is national in scope, design elements

prevent it from being representative of the general population. Most notably, the cohabitors were recruited in three different ways, including Internet advertisements. Although the sample of cohabitors is similar to cohabitors nationwide (Vespa et al., 2013), the sample is not a random sample.

Second, all couples in the data set were opposite-sex. Relatively little is known about ACP among same-sex couples, although this is an important line of inquiry as same-sex couples are gradually gaining the legal right to marry across the United States. Recent epidemiologic studies document the protective effects of legalizing gay marriage on mortality risk (Frisch & Simonsen, 2013). Our study suggests that legal structures enabling same-sex partners to commit to one another for a long-term relationship may also enhance the quality of end-of-life care, via the use of effective ACP tools.

Third, the study was cross-sectional. End-of-life preferences change as one ages and health declines (Ditto, Jacobson, Smucker, Danks, & Fagerlin, 2006). Relationship quality may also change over the course of one's marriage, which carries implications for one's health and well-being. As such, relationship quality may have lagged effects that emerge only once a couple faces a health crisis.

Fourth, the data do not include several key pieces of information. The timing of one's ACP is unknown; thus we cannot ascertain whether one completed ACP or appointed a particular person as their DPAHC before or after a relationship transition, nor what the trigger was for one's ACP. Health insurance status is also unknown. There are likely marital status disparities in who is insured, and many health insurance companies provide education about ACP as part of their preventative care services.

Conclusion

For young and even midlife adults, ACP is viewed as a task for the distant future, and most healthy people wait until a health crisis emerges (Schickedanz et al., 2009). Health care professionals should target such beliefs, especially among persons who do not have clear expectations about who will be by their side in later life. Clinicians can emphasize that ACP is a long-term dynamic process that can and should be repeated and revisited as one's life circumstances change. Although one's partner may change several times over the life course, one constant in a person's life should be the presence of ACPs to ensure that those preferences are heeded.

Appendix

Characteristics of Cohabitors by Recruitment Method

	Both partners on the panel (n = 216)[a]	One partner on the panel (n = 62)[b]	Neither partner on the panel (n = 368)[c]	Significant subgroup differences
	M (SD) or %	M (SD) or %	M (SD) or %	
End-of-life planning				
No plans	41	56	52	ac
Formal plans only	5	2	3	
Informal plans only	35	34	25	ac
Both types of plan	19	8	20	
DPAHC appointment				
None	79	91	80	
Spouse/partner	14	5	10	
Other person	6	3	11	
Relationship quality				
Perceived quality (18 = *lowest* to 25 = *highest*)	21.63 (2.60)	22.31 (2.56)	21.62 (2.44)	
Age				
Age (years)	41.44 (11.97)	38.84 (12.36)	35.60 (12.71)	ac
Compositional factors				
Fair or poor health	17	16	10	
High school or less	32	21	26	
Some college	44	53	48	
College degree/more	24	26	26	
White	75	81	68	
Black	11	5	13	
Hispanic	9	15	10	
Other race/ethnicity	5	0	10	
Any biological children, current union	27	29	23	
Total household income (1 = *less than $5,000* to 19 = *$175,000 or more*)	11.44 (4.07)	11.37 (4.17)	10.44 (4.19)	ac
Owns residence	58	70	42	ab, bc
Relationship duration (years)	10.95 (9.70)	6.84 (7.60)	6.77 (7.57)	ab, ac

Note. One-way analysis of variance (ANOVA) tests were conducted to assess differences among the groups formed by the three recruitment methods. DPAHC = durable power of attorney for health care; ac = both partners on the panel vs. neither partner on the panel; ab = both partners on the panel vs. one partner on the panel; bc = one partner on the panel vs. neither partner on the panel.

Authors' Note

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