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Romantic Relationship Quality and Knowledge of a Partner's End-of-Life Preferences

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Abstract

Numerous studies that match participants' end-of-life health care treatment preferences to their surrogates' guesses of those preferences indicate that surrogates may often be inaccurate: Random guesses are just as likely as surrogate choices to match the participants' preferences. The present study uses the interdependence model of couple communal coping and behavior change and the positive illusions model to shed further light on whether relationship quality is associated with heterosexual romantic partners' accuracy as one another's health care surrogates. We examine these questions in a nationally representative sample of 1,075 American couples aged 18 to 64. We find that women's high ratings of relationship quality are associated with a greater likelihood of surrogates making an error, whereas men's high ratings of relationship quality are associated with a reduced likelihood of the surrogate making an error. These findings lend support to both theoretical models.

Romantic Relationship Quality and Knowledge of a Partner's End-of-Life Preferences

Advance care planning is a process intended to provide medical treatment in a way that honors the autonomy of dying patients who are physically or cognitively incompetent to make health care decisions for themselves. Part of an advance care plan is the appointment of a durable power of attorney for health care (DPAHC), a legal surrogate who is authorized to make medical decisions on behalf of a patient. For three-quarters of married older adults, the spouse serves as DPAHC, and among married older adults who have not yet appointed a DPAHC, over three-quarters intend for their spouse to serve that role (Carr & Khodyakov, 2007; Moorman, 2011).

The law instructs surrogates to apply the standard of substituted judgment; that is, to choose the treatment that the patient him or herself would choose, if able (Sabatino, 2010). Surrogates are to disregard both their preferences for their own end-of-life care and their personal preferences for the patient. However, numerous studies that use hypothetical treatment scenarios to match participants' preferences to their surrogates' guesses of those preferences indicate that DPAHCs may often be inaccurate at substituted judgment: Random guesses are just as likely as surrogate choices to match the participants' preferences (e.g., Moorman & Carr, 2008; Shalowitz, Garrett-Meyer, & Wendler, 2006). A great deal of research has attempted to identify contexts in which surrogates do better.

But little research has investigated the role that perceptions of relationship quality play in DPAHCs' judgment, although many end-of-life decisions are made in the context of a long-term romantic relationship. Romantic partners know one another perhaps more intimately than anyone else, but their emotional involvement may render them unable to act on this knowledge objectively. Even major theories of relationship processes yield competing hypotheses as to whether relationship quality should be expected to aid or impede surrogates. Therefore, the

present paper uses the interdependence model of couple communal coping and behavior change (Lewis, McBride, Pollak, Puleo, Butterfield, & Emmons, 2006), and the positive illusions model (Murray, Holmes, & Griffin, 1996a), to shed further light on the dyadic processes that affect end-of-life decision-making. In a nationally representative sample of 1,075 heterosexual American couples aged 18 to 64, we examine how overall relationship quality is associated with surrogate accuracy for men and women. The results of this research may help to build theory on family relations and to inform clinicians who facilitate advance care planning.

The Interdependence Model of Couple Communal Coping and Behavior Change

That married persons enjoy better health outcomes than their unmarried peers has been widely recognized for nearly 25 years (House, Landis, & Umberson, 1988). Part of this association is due to selection of healthier individuals into marriage (Murray, 2000; Waldron, Hughes, & Brooks, 1996). However, relationship *quality* also has causal effects on health. Men and women use more health care services in happy marriages and fewer health services in distressed marriages (Sandberg, Miller, Harper, Robila, & Davey, 2009). Further, adoption of positive health behaviors and cessation of negative health behaviors occur more often in good relationships than in poor ones (Martire, Schulz, Helgeson, Small, & Saghafi, 2010).

The interdependence model of couple communal coping and behavior change asserts that among the causal mechanisms linking relationship quality to health behavior change is *transformation of motivation* (Lewis et al., 2006; Rusbult & van Lange, 1996; 2003). Ordinarily, individuals are motivated to benefit their own personal immediate wants and needs. In good romantic relationships, individuals' motivations shift to preserving the relationship rather than gratifying the self, and so they change their behavior to act in ways that are more cooperative and relational. Looking beyond immediate self-interest promotes longer-term goals including health,

and activates communal coping (Lewis et al. 2006). In communal coping, partners define a situation as a mutual concern requiring joint effort and collaborate to achieve a result (Lyons, Michelson, Sullivan, & Coyne, 1998). Therefore, relationship quality may produce transformed motivation and communal coping, functions that permit couples to share an orientation towards end-of-life and to perform as accurate surrogates for one another.

The Positive Illusions Model

Prior research demonstrates strong links between relationship quality and health, but it has also established strong links between relationship quality and biased judgment (Kenny & Acitelli, 2001). The positive illusions model states that idealizing one's partner serves important functions in sustaining relationship quality (Murray, Holmes, & Griffin, 1996a). People are strongly motivated to believe that their partners are trustworthy, attractive, warm, and responsive, for instance, and to the extent that they believe these things, their relationship quality is higher and protected from decline over time (Murray, Griffin, Derrick, Harris, Aloni, & Leder, 2011). While accurate perceptions of one's partner are sometimes important, such as when making future evaluations at the beginning of a relationship, positive illusions can be self-fulfilling prophecies and partners' perceptions become less accurate with time spent in the relationship (Murray, Holmes, & Griffin, 1996b; Scheibehenne, Mata, & Todd, 2011).

One study of spousal surrogates found that among the positive illusions married persons hold is the belief that their spouse will, and will want to, live as long as possible (Lemay, Pruchno, & Feild, 2006). Surrogates chose aggressive treatment for their spouses in hypothetical end-of-life care scenarios, and believed that they had made substituted judgments. Further, the higher quality the relationship, the more likely they were to do this.

Therefore, there are two strong theoretical reasons to expect that romantic relationship quality will be associated with surrogate accuracy, but they generate competing hypotheses. The interdependence model of couple communal coping and behavior change suggests that happy partners will be more accurate surrogates, whereas the positive illusions model suggests that happy partners will be less accurate surrogates. In the present study, we test these two predictions using dyadic reports of relationship quality and treatment preferences.

Potential Differences for Men and Women Surrogates

The two theories also offer differing hypotheses about the role of gender in the relationship between relationship quality and surrogate accuracy. The interdependence model of couple communal coping and behavior change posits that the link between relationship factors and health may be stronger for men than it is for women; that is, men's health is more dependent on their wives' influence than vice versa (Lewis et al., 2006; Umberson, 1987). Research on Type II diabetes finds that married men perceive more social control over their chronic disease management than do married women (August & Sorkin, 2010). Healthy married men say that their wives' social control has more influence on their health behavior than healthy women say that their husbands' social control does (Lewis & Butterfield, 2007). However, results are mixed; research on spousal influence over weight loss and cancer screening has found no gender differences (Manne, Kashy, Weinberg, Boscarino, & Bowen, 2012; Novak & Webster, 2011).

The positive illusions model predicts no gender differences in levels of accuracy and bias in cross-gender reports (Kenny & Acitelli, 2001). This model posits that women typically have better social perception than men, but that women are also typically more expressive, and thus easier to "read," than men. Prior research has not found evidence of gender differences in performance as a surrogate; men and women are equally likely to accurately predict their

partner's preferences (Moorman, Hauser, & Carr, 2009; Pruchno, Rovine, Cartwright, & Wilson-Genderson, 2008).

However, no research using either theory has examined the interaction of gender and relationship *quality* in determining a health outcome. Because no study has examined relationship quality, no study has included dyadic data on relationship quality. The present study does both of these things, and seeks to find evidence in support of either the interdependence model of couple communal coping and behavior change or the positive illusions model.

Related Influences on Surrogate Accuracy

In our analyses, we control for several characteristics of the surrogate and the couple that have been found to be related to both end-of-life concerns and relationship quality in prior research. The strongest known predictor of surrogate accuracy is the surrogate's preference for his or her own care (Moorman, Hauser, & Carr, 2009; Pruchno, Lemay, Field, & Levinsky, 2005). That is, surrogates project their own preferences onto the patient for whom they are making decisions. Other important measures are sociodemographic; for instance, DPAHCs may be more accurate when both surrogate and patient are African-American rather than white (Schmid, Allen, Haley, & DeCoster, 2010). Age, educational attainment, and household income are also associated with treatment preferences and advance care planning (e.g., Carr & Khodyakov, 2007; Carr & Moorman, 2009).

These factors are also related to relationship quality, and to the status of a relationship as a marriage or cohabitation. For instance, racial/ethnic differences in relationship quality and relationship stability exist, such that white and Hispanic couples enjoy longer, higher quality relationships than do black couples, on average (e.g., Bulanda & Brown, 2007). Higher socioeconomic status, including educational attainment and income, is also associated with

higher relationship quality and marriage (Conger, Conger, & Martin, 2010). Therefore, we include these measures in our analyses to reduce confounds to our conclusions.

Methods

Data

We used dyadic data from an internet survey conducted by Knowledge Networks, in conjunction with the National Center for Family and Marriage Research at Bowling Green State University, between July and October of 2010. This cross-sectional study included a sample of 1,075 married or cohabiting heterosexual couples (i.e., 2,150 individuals) between 18 and 64 years of age residing in the United States. Seventy percent of the couples were married and 30% were cohabiting.

In 1999, Knowledge Networks established the first online research panel (KnowledgePanel) that is a representative sample of the entire U.S. population, using probability-based sampling methodology that covers both the computer user and non-computer user populations. If the panel members did not have access to the Internet, the necessary equipment was provided. Recent research on survey methods indicated that a survey using the KnowledgePanel was comparably nationally-representative to a random-digit-dial (RDD) telephone survey (Chang & Krosnick, 2009). Additionally, data from KnowledgePanel internet participants were superior in reliability and validity to data from the RDD telephone survey (Chang & Krosnick, 2009).

The couples in this study were primarily recruited from the KnowledgePanel. Of the 70% of the sample comprised of married couples, all participants (i.e., both husbands and wives) were panelists. Of the 30% of the sample comprised of cohabiting couples, a third of participants (i.e., both partners) were panelists. An additional two sources were used to generate the remaining

sample of cohabiting couples: Ten percent of cohabiting couples were comprised of a KnowledgePanel member and partner who was not on the panel, and 57% of cohabiting couples were comprised of two partners recruited through online advertisements (i.e., an off-panel non-probability sample).

Response rates varied by recruitment method. To be counted as a valid response, both partners in the couple had to complete a valid survey. Recruitment within the panel yielded a 50% response from married couples and a 41% response from cohabiting couples. Recruitment of panel members and their non-panel-member partners yielded only a 5% response rate. Response rates are not calculable for convenience samples, so response to the web advertisement is unknown.

Dependent Measure

Accuracy of partners' estimates. The accuracy of participants' estimations of their partners' end-of-life treatment preferences was assessed by two items. First, participants were told "Suppose *you* had a serious illness today with very low chances of survival. What if you were mentally intact, but in severe and constant physical pain?" Based on this hypothetical scenario, they were asked to rate the level of treatment that they would like to receive using a scale ranging from 0 (*stop all life-prolonging treatment*) to 10 (*continue all treatment*). Then they were given another hypothetical scenario about their partners: "Now please think about your spouse or partner. Suppose *your spouse/partner* had a serious illness today with very low chances of survival. What if s/he were mentally intact, but in severe and constant physical pain?" They were asked to estimate the level of treatment that their partner would like.

We constructed two outcome variables matching one partner's estimate against the other partner's reported preference. One variable was derived from subtracting each male partner's

actual preferences from his female partner's estimate of his preferences, and the other variable was created from subtracting each female partner's actual preferences from her male partner's estimate of her preferences. Therefore, a score of 0 represented perfect accuracy, while positive scores indicated an error of overtreatment (a partner believing that the other wanted more care than he or she had actually indicated), and negative scores indicated an error of undertreatment (a partner believing that the other wanted less care than he or she had indicated). Because these variables had few extreme values, we categorized them as follows: under by 3 or more, under by 1-2, accurate, over by 1-2, over by 3 or more. The results are robust to alternate functional forms of these variables.

Key Independent Measures

Relationship quality. *Perceived quality* was measured by a scale developed from the following five items: (1) Taking all things together, how satisfied are you with your relationship with your spouse or partner? (2) How satisfied are you with how well your spouse/partner listens to you? (3) How much do you agree or disagree with the following statements? My spouse/partner shows love and affection toward me; (4) My spouse/partner encourages me to do things that are important to me; and (5) My spouse/partner listens when I need someone to talk to. Likert-type answer categories ranged from 1 (*very satisfied* or *strongly agree*) to 5 (*very dissatisfied* or *strongly disagree*). Responses were summed to create two scales – one for women and one for men - with a possible range of 5 – 25 where higher values indicated better perceived quality (Cronbach's α was 0.89 for women and 0.86 for men). Because only 1.8% of men and 3.9% of women had scores less than 13, we bottom-coded these variables to make 13 the minimum value. We then conducted square transformations to further reduce skew. Finally, we standardized the variables because standard deviations are an easily-comprehensible metric.

Gender. Partners reported if they were male or female. Again, this project surveyed only heterosexual couples, so each dyad included one male and one female partner.

Partner Characteristics

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; 88.0% of respondents reported that their health is excellent, very good, or good. Therefore, we dichotomized this variable coding *fair* and *poor* as 1 and *good*, *very good*, and *excellent* as 0.

Chance of relationship dissolution. Participants were asked "What are the chances you and your spouse/partner will break up in the future?" Response categories included no chance, little chance, 50-50 chance, a pretty good chance, and an almost certain chance. Because more than half of the respondents' answers fell into the category of *no chance of break up*, the variable was dichotomized such that *no chance* was coded as 0 and the remaining categories were coded as 1 *any chance of break up*.

Surrogate Characteristics

Measures of surrogates' self-reported health and perceived chance of relationship dissolution, identical to those asked of partners, were included.

Preference for own care. Because previous studies found surrogates' preference for his or her own end-of-life care to be a strong predictor of surrogate accuracy, we controlled for the surrogates' preferences for themselves. Respondents specified their preferred treatment level ranging from 0 (*stop all life-prolonging treatment*) to 10 (*continue all treatment*) based on the question "Suppose *you* had a serious illness today with very low chances of survival. What if you were mentally intact, but in severe and constant physical pain?"

Sociodemographic characteristics. We also controlled for surrogates' sociodemographic characteristics, including *age*, *race*, and *education*. *Age* is a continuous variable ranging from 18 to 64 years. *Race* has four categories: *White* (reference group), *Black*, *Hispanic*, and *other*. The "other" category included respondents who reported belonging to two or more racial categories. *Education* is a variable with three categories: *high school or less* (reference category), *some college education*, and *bachelor's degree or higher*.

Couple Characteristics

The sociodemographic characteristics of the couple were assessed by *relationship status* and *household income*. *Relationship status* refers to a couple's current legal arrangement: Those who were *cohabiting* with a romantic partner were coded as 1, and those who were *married* comprised the reference category. *Annual 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*."

Analytic Strategy

For the first research question on the main effects of perceived relationship quality, multinomial logistic regression analyses were performed, with "perfect match" serving as the reference group. We conducted separate regressions for women serving as surrogates for men's preferences, and men serving as surrogates for women's preferences. Models included (a) both surrogates' and partners' reports of relationship quality and perceived health status, (b) surrogates' characteristics, and (c) couples' characteristics. All analyses, both descriptive and multivariate, were weighted to adjust for differences in probability of selection, which contributes to making the sample more representative of the population of American adults aged 18-64 in heterosexual cohabitations or marriages.

To answer the second research question, on gender differences, we performed formal tests comparing the coefficients in the models for women surrogates to the corresponding coefficients in the models for men surrogates. That is, we compared the role of surrogate's own perceive relationship quality – woman's rating in the woman surrogate models to man's rating in the man surrogate models - across models. All analyses were conducted using the statistical software package Stata 11.0; comparison of coefficients from separate models was achieved using the "suest" command.

The majority of cases – 94.7% of women and 92.3% of men – answered all measures of interest. Although the number was small, annual household income was the variable missing the most observations; 10 cases (0.9%) among women and 34 cases (3.2%) among men. Therefore, listwise deletion was used.

Results

Descriptive Statistics

A little over a quarter – 28.69% of women and 26.37% of men – accurately reported their partner's preferences. Other responses were about evenly divided between errors of overtreatment (i.e., the surrogate chose more aggressive treatment than the partner preferred) and errors of undertreatment (i.e., the surrogate chose less aggressive treatment than the partner preferred). There were no significant gender differences in accuracy or error. Men and women did differ in their average ratings of relationship quality, with men reporting significantly higher quality than women. Please see Table 1 for descriptive statistics on all variables used in the analysis for men and women.

[Table 1 about here]

Effects of Relationship Quality

Surrogates' own perceived relationship quality was associated with more errors for women surrogates, but fewer errors for men surrogates. In the women's model (see Table 2), a standard deviation increase in women's perception of relationship quality was associated with 57% greater odds of an estimation that was 1-2 above the male partner's reported preference ($p < .01$) and with 44% greater odds of an estimation that was 3 or more above the partner's reported preference ($p < .01$). In the men's model (see Table 3), a standard deviation increase in men's perceived relationship quality was associated with a 26% reduction in the odds of an estimation that was 1-2 below the female partner's reported preference ($p < .05$).

For both men and women surrogates, own perceptions of relationship quality were countered by partners' perceptions. In the women's model, a standard deviation increase in *men's* perception of the relationship's quality was associated with a 39% decrease in the odds of an estimation that was 1-2 above the man's reported preference ($p < .001$) and with a 35% decrease in the odds of an estimation that was 3 or more above the male partner's reported preference ($p < .001$). In the men's model, a standard deviation increase in *women's* perception of the relationship's quality was associated with a 36% increase in the odds of an estimation that was 1-2 units below the woman's reported preference ($p < .05$).

We tested whether partners' reports of relationship quality had opposing effects due to collinearity between their reports. Partners did reported high levels of agreement in their appraisals of relationship quality. Men's and women's perceived quality ratings were significantly positively correlated ($\rho = 0.59$, $p < .001$), and 74.7% of couples agreed that there was or was not any chance of relationship dissolution. Therefore, we tested our assumption that including reports for both partners accurately represented the relationship quality of a couple. We estimated models using only the surrogate's ratings of relationship quality, and models using

only the partner's ratings of relationship quality, and compared these to models that included both partners' ratings. We concluded that models including both partners' reports accurately represent the data, because the pattern of results across the three models did not vary. Women's reports of relationship quality are associated with more surrogate error, while men's reports of relationship quality are associated with less surrogate error. We also estimated models measuring relationship quality as the sum of the man's and woman's report. In those models, relationship quality was not significantly associated with surrogate accuracy in any instance. The results of these tests are available upon request.

[Tables 2 and 3 about here]

Gender Differences

For the most part, men and women performed similarly as surrogates; there was only one significant difference between the men's model and the women's model. That coefficient is marked in bold in Tables 2 and 3. A standard deviation increase in a partner's report of relationship quality decreased the likelihood of a 3 or more unit error of overtreatment for women surrogates, but was not significant for men surrogates. These coefficients differed from one another significantly ($\chi^2 = 8.54$, $p < .01$).

Discussion

The present study used the interdependence model of couple communal coping and behavior change (Lewis et al., 2006) and the positive illusions model (Murray, Holmes, & Griffin, 1996a) to examine the role of relationship quality in men's and women's accuracy as one another's health care surrogates. We examined these questions in a nationally representative sample of 1,075 heterosexual American couples aged 18 to 64. We found that one's own rating of high relationship quality and one's partner's rating of high relationship quality had opposing

effects on surrogate accuracy; women's ratings were associated with greater error while men's rating were associated with less error. Men and women performed similarly as surrogates. Below we interpret the results, which have important implications for theory on the health effects of relationship quality and for the clinical work of those who facilitate advance care planning.

Relationship Theory and Accuracy as a Health Care Surrogate for a Romantic Partner

The results can inform future work using the positive illusions model or the interdependence model of couple communal coping and behavior change. The interdependence model of couple communal coping and behavior change led to the hypothesis that happy relationships would produce more accurate surrogates, because supportive partners would collaborate to facilitate one another's positive health behaviors (i.e., preparations for end-of-life) (Lewis et al., 2006). Conversely, the positive illusions model led to the hypothesis that happy relationships would include less accurate surrogates, because the same cognitive and emotional biases that boost relationship quality also place limits on objective appraisals of one's partner (Murrray, Holmes, & Griffin, 1996a). Because this study employed dyadic data, we found evidence in support of both theories.

Women's perceptions of high relationship quality were associated with both men and women having an increased likelihood of making an error of overtreatment; that is, predicting that the partner would want more aggressive treatment than he or she in fact wanted. This finding is consistent with the one prior study on relationship quality and surrogate accuracy, and with the positive illusions model (Lemay, Pruchno, & Feild, 2006). The better one's relationship, the less likely one is to be able to conceive of losing that relationship through the partner's death. Surrogates chose aggressive treatment for their partners, presumably to prevent this eventuality.

Men's perceptions of high relationship quality were associated with an increased likelihood of surrogate accuracy. This finding is consistent with the interdependence model of couple communal coping and behavior change. Better relationship quality stimulates an orientation towards the couple, rather than towards the self alone. Partners cope communally, defining end-of-life decision-making as one of many mutual health concerns requiring joint effort to achieve surrogate accuracy (Lyons, Michelson, Sullivan, & Coyne, 1998). The partner's love for his or her surrogate cancels out the surrogate's death denial, resulting in no net effect of relationship quality on surrogate accuracy.

Other results lend support to the idea that both processes are at work in partner surrogacy situations. In support of the positive illusions model, gender differences in surrogate accuracy were minor. This model posits that women may have an advantage because they typically have better social perception than men, but that men may have a corresponding advantage because women are more communicative and thus easier to interpret than men. In support of the interdependence model of couple communal coping and behavior change, supplementary analyses (not shown) suggest that marital quality is more strongly related to surrogate accuracy when one or both partners is in poor health. The interdependence model of couple communal coping and behavior change predicts that finding, arguing that health threats function as a stimulus to transformation of motivation (Lewis et al. 2006).

Working with Couples

The findings also have implications for the various clinicians who work with couples to facilitate advance care planning. Research on chronic illness has shown that behavioral interventions are slightly but reliably more successful when they target couples rather than individuals (Martire, Schulz, Helgeson, Small, & Saghafi, 2010). End-of-life planning

interventions targeted at individuals have been successful at increasing rates of advance care planning; for instance, the Respecting Choices program achieved a 90% rate of completion of plans among decedents in one mid-Western healthcare system (Hammes, Rooney, & Gundrum, 2010). The latter interventions could easily incorporate a couple component, since surrogate decision-making is already a dyadic process.

The form a couple component should take is less clear. Couple conferences facilitated by a professional are an appealing option (Doukas & Hardwig, 2003). However, several studies indicate that discussion of health care preferences between prospective surrogates and patients does not have a significant effect on surrogate accuracy (e.g., Ditto et al., 2001; Moorman, Hauser, & Carr, 2009). A similar problem may affect surrogates' discussions with physicians: Surrogates are consistently over-optimistic about prognostic information they receive from doctors (Zier, Sottile, Hong, Weissfield, & White, 2012). Surrogates' positive illusions may be the key to accuracy problems, and discussions that do not account for this bias may be insufficient to solve the problem.

Discussions may be organized in ways that reduce surrogates' cognitive biases. Mindset theory in psychology indicates that accuracy is increased, and bias reduced, when people make decisions in a *deliberative* rather than *implemental* mindset (Gagné & Lydon, 2004). A deliberative mindset encourages impartial, realistic thinking with a careful weighing of pros and cons, whereas an implemental mindset involves planning steps to reach a goal. People are able to be most deliberative when there is little time pressure and there are many possible alternatives. Therefore, perhaps couple conferences that emphasize options and occur long before patients are close to death would maximize surrogate accuracy.

Limitations

This study is limited in several important respects. First, although the sample is a national one, design elements such as selection of heterosexual couples only prevent it from being truly nationally-representative. There is also debate about how representative an internet survey can possibly be, even when the sample is constructed using random digit dial (as large parts of this sample were), given that the internet-using population is (a) innumerable and (b) unlikely to have similar sociodemographic characteristics to the national population (Chang & Krosnick, 2009).

Second, participants in this study may be too young to have considered death and dying in much detail. Only 28% had any formal advance care plans (i.e., a living will and/or DPAHC), and slightly over half (55%) reported having discussed their end-of-life treatment preferences with another person (Moorman & Inoue, under review). Relationship quality and health may be more salient to older, sicker persons (Boerner & Carr, under review).

Third, the survey did not include a measure of relationship duration. It is likely that long-term couples are better at transformation of motivation than are short-term couples, both because of practice and because the importance of one's partner to one's well-being likely grows over time. Longitudinal studies following couples over time may be the best method for capturing the ways in which relationship functioning changes.

Finally, self-reported health was our only measure of health. Self-reported health is a strong measure, independently predictive of mortality (DeSalvo, Bloser, Reynolds, He, & Munter, 2006). Yet future research should examine the relationship of surrogate accuracy to additional aspects of health, such as degree of functional limitation, number of hospitalizations, or disease diagnoses. Such research could help explain the circumstances under which health status cues couples to cope communally.

Conclusions

In heterosexual marriages and cohabitations, partners' reports of a good relationship seem to work at cross-purposes for surrogates trying to determine the end-of-life health care treatment preferences of the other person. If the woman believes the relationship to be good, the surrogate – regardless of whether the woman or the man is the surrogate – is more likely to make an error in predicting those preferences. If the man believes the relationship to be good, the surrogate – again, either the man or the women – is more likely to be accurate. Scholars and clinicians alike should be aware of the potential for such effects, and future research should investigate whether these findings hold within heterosexual couples of older ages and within same-sex couples of any age.

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Table 1

Characteristics of Respondents to the National Center for Family and Marriage Research / Knowledge Networks Pilot Study 2010

	Women	Men
	Percent	Percent
Accuracy as a Surrogate		
Under partner's choice by 3 or more	18.95	21.74
Under partner's choice by 1-2	13.68	15.73
Perfect match	28.69	26.37
Over partner's choice by 1-2	13.68	15.19
Over partner's choice by 3 or more	25.00	20.98
Relationship Quality		
Perceived quality (5 = *lowest*; 25 = *highest*) [a, b]	21.33	22.06***
	(3.54)	(3.02)
Individual Characteristics		
No chance of relationship dissolution	57.93	56.23
Any chance of relationship dissolution	42.07	43.77
Fair/poor health	13.40	11.02
Good/very good/excellent health	86.60	88.98
Treatment preference for self (0 = *stop life-prolonging*	5.55	5.03**
treatment; 10 = *continue all treatment*) [a]	(3.51)	(3.69)
Age (years) [a]	41.86	43.23
	(11.87)	(11.67)***

White	76.46	70.16***
Black	5.92	8.09***
Hispanic	10.21	14.92**
Other race/ethnicity	7.42	6.84
High school or less	31.30	44.19***
Some college	38.39	25.03***
College degree or more	30.31	30.77
Couple Characteristics		
Married	81.86	81.86
Cohabiting	18.14	18.14
Annual household income	12.26	12.29
(1 = *less than $5,000*; 19 = *$175,000 or more*) [a]	(3.95)	(3.94)
N	1065	1041

Note. Statistics are weighted to be representative of the U.S. population. Chi-square tests (for categorical measures) and *t*-tests (for continuous measures) were conducted to assess statistically significant gender differences, where

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

[a] Mean and standard deviation shown.

[b] Descriptive statistics reported prior to correction for skew.

Table 2

Multinomial Logistic Regression, Odds that a Woman Knows Her Male Partner's Treatment Preference

	Under by 3 or more (N = 181)	Under by 1-2 (N = 154)	Over by 1-2 (N = 140)	Over by 3 or more (N = 236)
	vs. Perfect Match (N = 307)			
	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)
Relationship Quality				
Perceived quality: Woman (S.D.)	1.28 (0.97-1.67)	1.15 (0.87-1.53)	1.57** (1.16-2.12)	1.44** (1.13-1.85)
Perceived quality: Man (S.D.)	0.79 (0.60-1.03)	0.84 (0.64-1.10)	0.61*** (0.46-0.80)	**0.65*** (0.51-0.82)**
Partner's (Man's) Characteristics				
Any chance of relationship dissolution	0.66 (0.40-1.07)	0.87 (0.52-1.44)	0.40** (0.24-0.69)	0.81 (0.52-1.26)
Fair/poor health	1.11 (0.61-2.03)	0.21** (0.08-0.54)	0.40* (0.18-0.90)	0.54* (0.30-0.97)
Surrogate's (Woman's) Characteristics				
Fair/poor health	0.72	1.03	0.73	0.95

	(0.38-1.34)	(0.54-1.96)	(0.35-1.55)	(0.55-1.64)
Any chance of relationship	1.63	2.22**	2.34**	1.33
dissolution	(0.98-2.71)	(1.30-3.78)	(1.34-4.07)	(0.83-2.15)
Treatment preference for self (0	0.86***	0.97	1.11**	1.18***
= *stop life-prolonging treatment*;	(0.81-0.92)	(0.92-1.04)	(1.04-1.18)	(1.12-1.25)
10 = *continue all treatment*)				
Age (years)	0.97**	1.00	0.98*	1.02*
	(0.96-0.99)	(0.98-1.02)	(0.96-1.00)	(1.00-1.04)
Black	0.33*	1.06	0.23*	0.57
	(0.12-0.92)	(0.48-2.36)	(0.06-0.84)	(0.27-1.20)
Hispanic	0.46*	0.56	1.02	0.72
	(0.25-0.86)	(0.28-1.10)	(0.58-1.78)	(0.42-1.23)
Other race/ethnicity	0.38*	1.24	0.63	1.21
	(0.14-0.98)	(0.58-2.65)	(0.25-1.59)	(0.62-2.37)
Some college	0.57*	0.70	0.59*	0.69
	(0.35-0.93)	(0.42-1.19)	(0.35-1.00)	(0.45-1.06)
College degree or more education	0.76	1.03	0.76	0.74
	(0.45-1.26)	(0.60-1.79)	(0.44-1.33)	(0.45-1.21)
Couple Characteristics				
Cohabiting	0.81	0.62	0.78	0.72
	(0.46-1.43)	(0.33-1.16)	(0.42-1.46)	(0.42-1.25)
Annual household income (1 =	1.01	1.00	0.99	0.95
less than $5,000; 19 = *$175,000*	(0.95-1.07)	(0.94-1.07)	(0.92-1.05)	(0.90-1.00)

or more)

N	1,018
χ^2; *df*	253.41;60

Note. Statistics are weighted to be representative of the U.S. population. **Bolded** coefficients are significantly different from corresponding coefficients in the parallel model for men knowing their female partner's preferences.

*$p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

S.D. This measure is standardized and has a mean of 0 and standard deviation of 1. Higher scores indicate better perceived quality.

Table 3

Multinomial Logistic Regression, Odds that a Man Knows His Female Partner's Treatment Preference

	Under by 3 or more (N = 222)	Under by 1-2 (N = 145)	Over by 1-2 (N = 167)	Over by 3 or more (N = 190)
	vs. Perfect Match (N = 268)			
	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)
Relationship Quality				
Perceived quality: Man (S.D.)	0.99 (0.77-1.27)	0.74* (0.57-0.96)	1.06 (0.80-1.40)	1.09 (0.84-1.41)
Perceived quality: Woman (S.D.)	1.08 (0.84-1.39)	1.36* (1.03-1.81)	0.97 (0.74-1.29)	**1.22 (0.93-1.59)**
Partner's (Woman's) Characteristics				
Any chance of relationship dissolution	1.10 (0.68-1.79)	1.39 (0.82-2.35)	0.76 (0.44-1.31)	1.39 (0.84-2.30)
Fair/poor health	1.27 (0.73-2.21)	0.66 (0.34-1.31)	1.66 (0.89-3.10)	0.86 (0.45-1.62)
Surrogate's (Man's) Characteristics				

Fair/poor health	1.20	0.64	0.80	2.14*
	(0.65-2.22)	(0.30-1.38)	(0.38-1.70)	(1.16-3.94)
Any chance of relationship	1.10	0.60*	0.95	0.93
dissolution	(0.70-1.74)	(0.36-0.99)	(0.57-1.58)	(0.58-1.51)
Treatment preference for self (0	0.87***	0.99	1.06	1.17***
= *stop life-prolonging treatment*;	(0.83-0.92)	(0.93-1.04)	(1.00-1.12)	(1.10-1.24)
10 = *continue all treatment*)				
Age (years)	1.00	1.00	1.01	1.00
	(0.98-1.01)	(0.98-1.02)	(0.99-1.03)	(0.98-1.02)
Black	0.56	1.00	0.12**	0.43*
	(0.27-1.15)	(0.49-2.03)	(0.03-0.46)	(0.19-0.97)
Hispanic	0.91	1.48	1.17	1.72*
	(0.50-1.66)	(0.82-2.68)	(0.64-2.15)	(1.00-2.96)
Other race/ethnicity	0.66	0.82	0.36*	0.91
	(0.31-1.39)	(0.37-1.85)	(0.13-0.98)	(0.43-1.95)
Some college	0.78	0.55*	1.15	1.18
	(0.48-1.25)	(0.32-0.94)	(0.67-1.96)	(0.72-1.92)
College degree or more education	1.19	1.09	2.33**	1.94*
	(0.73-1.96)	(0.64-1.85)	(1.36-4.00)	(1.16-3.24)
Couple Characteristics				
Cohabiting	1.13	1.27	1.94*	1.33
	(0.65-1.97)	(0.70-2.32)	(1.05-3.59)	(0.74-2.38)
Annual household income (1 =	1.03	1.00	1.02	1.02

less than $5,000; 19 = *$175,000 or more*)	(0.98-1.09)	(0.94-1.06)	(0.95-1.08)	(0.97-1.08)
N	992			
χ^2; *df*	210.46; 60			

Note. Statistics are weighted to be representative of the U.S. population. **Bolded** coefficients are significantly different from corresponding coefficients in the parallel model for men knowing their female partner's preferences.

*$p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

S.D. This measure is standardized and has a mean of 0 and standard deviation of 1. Higher scores indicate better perceived quality.