

# Utilizing a Family Decision-Making Lens to Examine Adults' End-of-Life Planning Actions

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**Abstract** Guided by Rettig's family decision-making theory, the study investigated the effect of an adult child's decision environment, an adult child's decision-making perceptions, and a parent's end-of-life (EOL) planning actions before death on an integrated measure of medical and financial EOL planning actions. Data came from Wave 3 of the public use data of the Wisconsin Longitudinal Study. Results indicated that household net worth, parent's completion of a living will before death, and adult children's avoidance of death ideation explained the greatest proportion of variance in adult children's EOL planning actions. Results also indicated that women, those married, and those with higher education did more EOL planning. Practitioners can use this information to close accessibility gaps due to net worth differences, advocate for a more unified approach to EOL planning, and shift the focus of discussions of death from the death itself to a life well lived.

**Keywords** End-of-life planning · Families · Estate planning · Adult children

## Introduction

An increased need for formalized end-of-life (EOL) planning, such as a living will or a durable power of attorney for health care (DPAHC), has evolved with an increased US life expectancy and a greater probability of experiencing death from a prolonged illness. Although increased life expectancy has provided individuals with more time to express and formulate their wishes for their end-of-life medical treatment and their estate settlement after their deaths, there still are a substantial number of people who do not formally plan for end-of-life concerns, either medically or financially (Committee on Approaching Death 2015; D'Souza 2015; Murphy et al. 2013).

Studies continue to find significant gaps in medical and financial EOL planning with between 15 and 59 % of older adults having completed formal medical EOL planning documents (Carr and Khodyakov 2007a; US Dept. of Health and Human Services 2008) and between 56 and 70 % having executed a will as part of their EOL estate planning (Humphrey et al. 2010). This lack of formal EOL planning creates problems including (a) placing health providers and family members in challenging positions where misinformation and/or inaccurate assumptions may exist, (b) creating situations where health care or financial resources may be managed in ways not desired, or (c) creating tensions and uncertainty within families because wishes of a dying family member may not be honored because wishes have only been shared informally.

Further, the literature on EOL planning has three gaps, which this study addresses. First, the existing literature has

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focused primarily on medical EOL planning even though medical care decisions can have significant financial impacts. In fact, Su (2008) indicated that medical and financial EOL planning are highly correlated and are often completed in tandem because of the economic impacts of the medical care planning. Rettig (1993) indicated that social and economic functions of the family are experienced simultaneously in everyday life. Thus, both medical and financial types of EOL planning are investigated simultaneously in this study to more closely reflect the actions of families.

A second gap in the literature is that it tends to ignore the family context in which EOL decisions are most often made. Rettig (1993) indicated that individual decisions impact the lives of the family members with whom they share both financial and social-psychological resources. The nature of an individual's decision environment includes an integration of economic and social-psychological considerations (Rettig 1993); those considerations that have been found to be associated with higher EOL planning, such as gender, health status rating, education and net worth, have been explored on the individual level (Carr and Khodyakov 2007a; Ha and Pai 2012; Moorman 2011a; Su 2008). This study focuses on (a) the underlying nature of the decision environment in which EOL decisions are made by adult children within a family, (b) the perceptions contributing to decisions, and (c) the interconnection between parental EOL decisions previously observed by adult children and their own EOL decisions.

The EOL studies in the literature that have acknowledged family as a context in EOL planning have explored the spousal context rather than the parent/child context (Moorman 2011a; Moorman and Carr 2008; Moorman et al. 2009). The spousal context is important but exploring parent–child context is both relevant and timely because aging adult children often care for their ailing parents. While caring for their parents, adult children are often confronted with many factors that appear to be associated with greater levels of EOL planning, such as experiencing the loss of a loved one (Carr 2011; Carr and Khodyakov 2007a, b) or potentially experiencing a decline in their own health (Carr 2012b; Collins et al. 2006; Ha and Pai 2012). Research has explored other dimensions of parents and their children across the life course, such as in the context of the caregiving relationship (Ott et al. 2007). However, the parent–child context and its association with EOL planning remain un-examined but will be a focus of this study.

A third gap in the current literature is that previous research has been largely atheoretical (Carr 2012b; Ha and Pai 2012; Moorman 2011b) or only implicitly theoretical (Carr and Khodyakov 2007b; Moorman et al. 2009; Sharp et al. 2012). Since family is the primary context in which

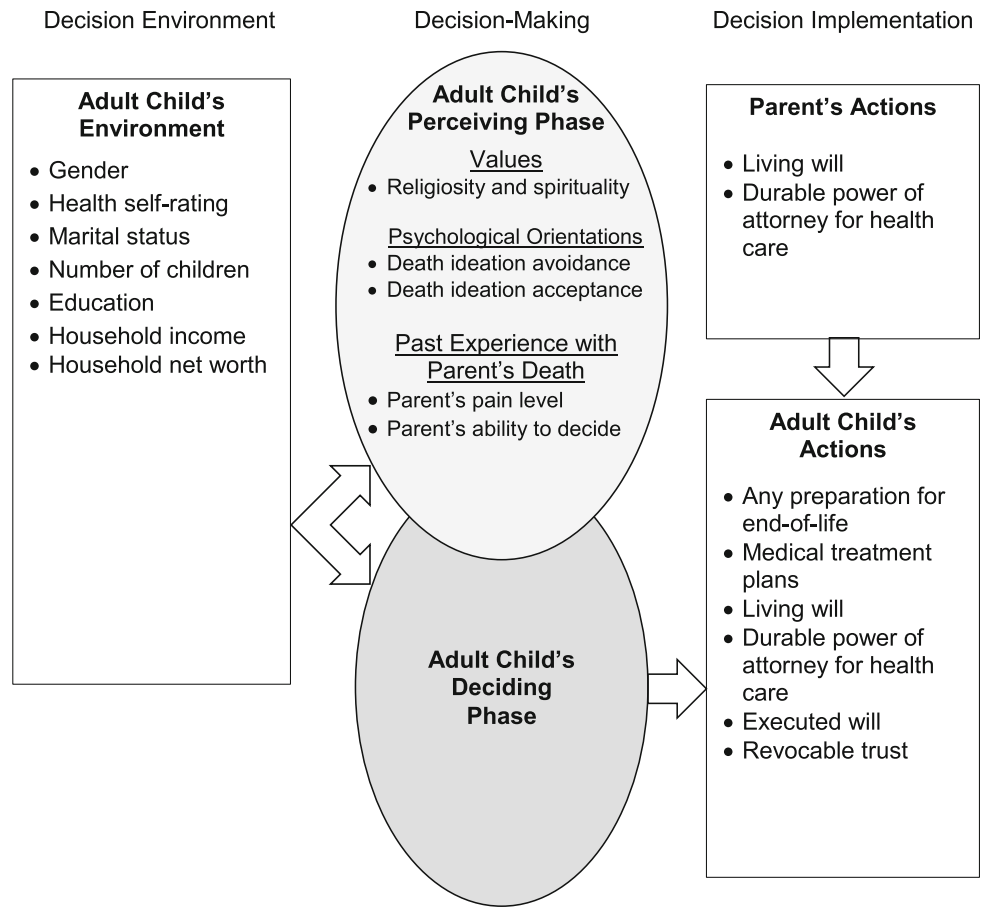
EOL decisions are made and implemented, it makes sense that a family decision-making theory such as Rettig's Family Decision Making Theory (FDMT) (1993) be used as the guiding theory for the study. FDMT is a theory that addresses the interpersonal dynamics of social decisions such as EOL planning by including perceiving, deciding, and actuating dimensions of decision making and, in so doing, addresses aspects of motivation and interaction in families as decisions are made. The core FDMT assumption that undergirds this study is: "most problems are identified at the interface between person and family or between family and environmental systems" (Rettig 1993, p. 191). The primary constructs from FMDT are the decision environment, decision-making perceptions, and actions that are taken as a result of a decision. Using this core FDMT assumption and the theory's constructs, the purpose of this study is to explore factors related to a combination of medical and financial EOL planning actions taken by adult children.

## Conceptual Framework and Literature Review

This study was grounded in Rettig's (1993) family decision-making theory (FDMT). FDMT explores environments, processes, and outcomes of families' decision making. Its use in this study was built on a previous application in a study about planning for the financial risk of long term care (Stum 2005; Schaber and Stum 2007). In this section, FDMT's concepts and assumptions are presented along with a description of the study indicators that represent the theory's concepts. An analytical model (Fig. 1) based on FDMT theory and current knowledge about indicators related to EOL planning decisions is presented. Relevant literature is organized based on the study's analytical model concepts (decision environment, decision-making process, and decision implementation). In this description, the word "family" is used to describe the family as a decision-making unit. The use of "individual" describes the adult child's behavior.

The decision environment is composed of characteristics of individual decision makers and their family and household (Bubolz and Sontag 2004; Rettig 1993). The characteristics might be personal (innate, learned, or acquired), economic, or social. The decision situation evolves out of this environment and creates opportunities and constraints for achieving the goal regarding the problem that is central to the decision situation. This study incorporated seven decision environment indicators: gender, education, and health self-rating represented personal characteristics of the adult child who was the study's decision maker; marital status and number of children represented social characteristics of the adult child's family; and household income

**Fig. 1** Analytical model of study variables in context of family decision-making theory theoretical constructs, demonstrating relationship among adult child’s environment (decision environment), adult child’s perceiving phase and deciding phase (decision-making process), and parent’s actions and adult child’s actions (decision implementation)



and net worth represented the economic characteristics of the adult child’s household.

Perceiving is the phase of the decision-making process in which individual decision makers and families recognize that a change or decision is needed. Perceptions of decision makers have a profound effect on whether a particular decision situation is viewed as an exciting opportunity or a stressful problem. Personal values, psychological orientations, and past experiences undergird decision makers’ perceptions (Rettig 1993). In this study, religiosity and spirituality represented the adult child’s values, death ideation avoidance and acceptance represented the adult child’s psychological orientations, and parent’s pain level and parent’s ability to make decisions in the last week of life represented the adult child’s experience with their parent’s death.

Each decision situation is specific to time, circumstances, and person (Rettig 1993). Adaptive decision behavior is not simply a function of the decision maker’s environment but exists as a codependent relationship of the interfacing individual and family systems (Rettig 1993). Thus, the decision implementation phase of this study included the EOL actions of the deceased parent as an

influencing factor in the EOL actions of the adult child. Figure 1 provides the study’s analytical model. The analytical model included the major conceptual dimensions of FDMT and the measurement indicators of those dimensions used within the study.

**Application of Family Decision-Making Theory**

*Adult Child’s Decision Environment*

Using FDMT’s definition of the decision environment, two elements of an adult child’s environment that may be associated with EOL planning are the adult child’s gender and health status. Studies suggested that women engaged in greater levels of medical EOL planning than men (Bravo et al. 2003; Carr and Khodyakov 2007a; Ha and Pai 2012; Su 2008). However, among studies that focused on completion of financial instruments alone, gender differences were not as clearly identifiable (AARP 2000; Goetting and Martin 2001). Studies implied that declining health was associated with greater levels of EOL planning (Carr 2012b; Collins et al. 2006; Kelly et al. 2013; Lambert et al. 2005).

Two other environmental elements are the adult child's marital status and number of children of the adult child. There were mixed findings about the association of these two variables with EOL planning. Several studies found a positive association between marriage and EOL planning (Carr 2012a; Carr and Khodyakov 2007a; Goetting and Martin 2001; Ha and Pai 2012; Humphrey et al. 2010; Su 2008), while others suggested a negative association (Hopp 2000; Kahana et al. 2004). The same was true for number of children. Some studies suggested a positive association (Carr 2012a; Carr and Khodyakov 2007a; Humphrey et al. 2010; Su 2008), while others found a negative association (Hopp 2000). Within these mixed findings, there was a preponderance of positive associations with EOL planning.

Further environmental elements include the adult child's education, household income, and household net worth. These three elements represent the adult child's attainment of common social-cultural goals. Studies suggested that there was a positive association between education level and EOL planning (AARP 2000; Carr 2012a, c; Carr and Khodyakov 2007b; Goetting and Martin 2001; Ha and Pai 2012; Hopp 2000; Humphrey et al. 2010; Lee 2000; Su 2008) and a positive association between household income and EOL planning (AARP 2000; Carr 2012a, c; Ha and Pai 2012; Kelly et al. 2013; Su 2008). Research also suggested that household net worth had a positive association with EOL planning (Carr 2012c; Goetting and Martin 2001; James 2009; Lee 2000; Su 2008). Owning a home had a significant impact on net worth (Gottschalck 2008), and studies thus suggested that homeowners were more likely to engage in EOL planning (Carr 2012a, c).

### *Decision-Making Process*

The decision-making process consists of the affective valuing and cognitive evaluations made by decision makers (Rettig 1993, p. 195). These affective valuing and cognitive evaluations are dependent upon the decision makers' perceiving styles, which involve "how individuals sense and feel in regard to the decision situation" (Rettig 1993, p. 198). The adult child's perceptions of the situation are therefore dependent on his or her personal values, psychological orientations, and past experiences (Rettig 1993, p. 198).

Personal values influence an adult child's perception of the situation. Religion and spirituality often serve as the foundation of a person's value orientation. Some research suggested that religiosity and spirituality had a negative association with EOL planning, with more strongly held religious convictions associated with lower levels of EOL planning (Allen et al. 2003; Carr 2011; Phelps et al. 2009). Other studies indicated that religiosity and spirituality were

both important factors among those who engaged in EOL planning (Carr and Khodyakov 2007b; Kelly et al. 2013; Lambert et al. 2005; Sharp et al. 2012).

Psychological orientations also influence an adult child's perception of the situation. Psychological orientations are defined as the cognitive and motivational orientations that guide behavior, and one of the greatest motivators of humans is survival (Rettig 1993, p. 198). In the interest of survival, some people may actively avoid thoughts of death (death ideation avoidance), while others may be more comfortable thinking about mortality (death ideation acceptance). Higher degrees of death ideation avoidance were associated with lower levels of EOL planning (Carr 2012b; Carr and Khodyakov 2007a, b; Moorman 2011b; Zimmerman 2007), while greater death ideation acceptance were associated with greater levels of EOL planning (Carr 2011; Lambert et al. 2005).

Additionally, because the adult child/parent interface is critical in the perception of the decision to be made, adult children's past experiences with their parents affect how adult children perceive situations. Studies suggested that greater EOL planning was associated with those who have experienced the recent death of a relative, friend, or significant other (Carr 2011; Carr and Khodyakov 2007a, b; Lambert et al. 2005).

In this study, all participants experienced a parental loss. Thus, this study explored adult children's perceptions of their experience with their parent's death, although the portions of the data set used in this study did not include whether a parent died spontaneously or after a prolonged illness. An adult child's perceptions about their parent's death informs their understanding of the experience of dying. Aspects of this experience that may affect adult children's perceptions includes their parent's ability to make decisions in the last week of life and their parent's pain level in the last week of life. Research by Carr (2012b) suggested that those whose loved one was able to make decisions were more likely to engage in EOL planning and those whose loved one experienced higher levels of pain were less likely to engage in EOL planning. Other studies, however, provided indications that adult children were more likely to engage in EOL planning if their loved one experienced pain (Carr and Khodyakov 2007a, b).

Although the current study had no direct measure of the deciding phase, it was included in the analytical model to demonstrate a clear conceptual link between the perceiving phase of the decision-making and decision implementation processes. This study did measure products of this phase by including indicators of the decision implementation process. Therefore, if an individual engaged in EOL planning, it confirmed decision implementation and offered evidence of completion of the deciding phase.

### Decision Implementation

Decision implementation in this study was viewed from two different perspectives: the parent's and the adult children's. First, a parent's decision implementation before death may have a connection with the adult child's decisions, reaffirming Rettig's assumption that "the family unit, in turn, is affected by individual choices" (1993, p. 190). As previously stated, there was some indication that among those who experienced the death of a close friend or relative, individuals were more likely to engage in EOL planning if their deceased close friend or relative had completed a living will or a DPAHC (Carr 2012a). This finding was crucial to the foundation of the present study, as it indicated that the context of relationships may help researchers understand factors that affect EOL planning. The current study focused on parents and their children, rather than the broader category of close friends and relatives. Parent's decision implementation was evidenced by the adult child's awareness of their parent's completion of a living will or a DPAHC.

Second, adult children's decision implementation was measured by the number of EOL planning activities in which the adult child knowingly engaged. Some studies included only formal medical EOL planning, such as the completion of living will or DPAHC (Carr 2012a; Lambert et al. 2005), and others included informal EOL planning in the form of discussions about medical treatment plans (Allen et al. 2003; Bravo et al. 2003; Carr 2012b; Hopp 2000; Kahana et al. 2004; Moorman 2011a). Others explored only formal financial EOL planning, such as a will or revocable trust (Humphrey et al. 2010; James 2009). However, very few included both medical and financial measures of EOL planning (Carr 2012c; Kelly et al. 2013).

The inclusion of formal financial EOL planning was important because of its neglect in the literature. Research by Su (2008) suggested that medical EOL planning was highly correlated with financial EOL planning and that they tended to be completed in tandem. EOL medical decisions often had economic end-of-life implications (Fan and Zick 2004). Steinhauer et al. (2000) found that those with advanced chronic illness and recently bereaved family members agreed that "naming a decision maker" (which is accomplished with a DPAHC) and "having financial affairs in order" (implying a will or revocable trust) were very important tasks to complete before death. Parnaby (2011) indicated that those processes were bound by a common thread of risk since both health and financial planning relied on estimates of an unwritten future; thus, he argued that they should be studied together.

Due to the complementary nature of medical and financial EOL planning, this study measured EOL planning

with both informal and formal measures, as well as both medical and financial measures of EOL planning. It measured EOL planning with the adult child's awareness of informal plans regarding EOL planning and medical treatment toward the end of one's life, formal medical plans in the form of a completed living will and completed DPAHC, and formal financial plans through a will and revocable trust.

To summarize, this study's purpose was to explore associations between the adult child's decision environment, adult child perceptions, and a parent's actions before death by investigating a combination of medical and financial EOL planning actions. Specifically, the following research questions were examined:

### Hypotheses

Based on the theoretical undergirding and the analytical model (Fig. 1), the following hypotheses were developed. Hypotheses indicating expected relationships among variables are presented first. Then hypotheses related to the hierarchical regression are presented.

**H1** Within an adult child's environment, gender and health self-rating will have a negative relationship with an adult child's EOL planning actions, and marital status, number of children, education, household income and household net worth will have a positive relationship.

**H2** Within an adult child's decision-making perceptions, religiosity and spirituality, death ideation acceptance, and parent's pain level in the last week of life will have a positive relationship with an adult child's EOL planning actions, and death ideation avoidance and parent's ability to make decisions in the last week of life will have a negative relationship.

**H3** Parent's completion of a living will and parent's completion of a DPAHC will have a positive relationship with an adult child's EOL planning actions.

**H4.1** Adult child's environment variables will significantly explain the variance in adult child's EOL planning.

**H4.2** Adult child's decision-making perception variables will explain greater variance in adult child's EOL planning actions above that explained by an adult child's environment.

**H4.3** Parents' EOL planning action variables will explain greater variance in an adult child's EOL planning actions above that explained by an adult child's environment and decision-making perceptions.

## Methodology

### Data Source

Participants were drawn from the 2003 wave of the Wisconsin Longitudinal Study (WLS) (1957–2005) (Hauser and Sewell 2003). WLS followed a cohort of men and women, along with spouses and selected siblings, who graduated from Wisconsin high schools in 1957. It is representative of White, non-Hispanic Americans with at least a high school education. Data were gathered using a combination of telephone and mail surveys. See Table 1

for a summary of environment variables of participants used in this analysis. Age of participants was not included in the final analysis, as it was essentially constant, because participants were drawn from the same high school cohort. However, age distribution is included in Table 1 for descriptive purposes. Further information about WLS may be found at the WLS website.

### Sampling Procedures

Of the 7265 participants surveyed in Wave 3 of the public use data set, 70 % ( $n = 5106$ ) were randomly selected to

**Table 1** Description of Adult Child's Decision Environment Variables ( $n = 1199$ )

Characteristic	<i>n</i>	%	M	Median	Mode	SD
Age at interview (years)			64.32	64.00	64.00	.68
63	90	7.5				
64	685	57.1				
65	377	31.4				
66	44	3.7				
67	3	.3				
Gender						
Female (0)	632	52.7				
Male (1)	567	47.3				
Health self rating						
Good to excellent	1094	91.2				
Fair to poor	105	8.8				
Marital status at interview						
Currently married	1003	83.7				
Not currently married	196	16.3				
Number of children			1.67	2.00	2.00	.82
Zero	79	6.6				
One to two	425	35.4				
Three to four	507	42.3				
Five or more	188	15.7				
Post-secondary education						
Less than 1 year of college	621	51.8				
1 year of college or more	578	48.2				
Household income (US\$)			71,348.05	49,128.00	.00	90,970.60
0 to 18,000	218	18.2				
18,004 to 36,000	224	18.7				
36,020 to 56,400	243	20.3				
56,436 to 89,384	247	20.6				
89,400 to 7,834,600	267	22.3				
Household net worth (US\$)			735,789.22	350,000.00	.00	1,390,936.35
−1,672,500 to −600	9	.8				
0 to 115,000	221	18.4				
115,000 to 244,000	228	19.0				
245,000 to 437,000	231	19.3				
437,500 to 848,000	254	21.2				
850,000 to 113,500,000	256	21.4				

complete a series of EOL planning questions, in an effort to reduce survey burden. Only respondents with valid responses to all six EOL planning questions ( $n = 4939$ ) were selected for this study sample. Finally, all of the remaining respondents were asked a series of questions about either their spouse's death or their parent's death, if they experienced either of these losses. Of the respondents with valid responses to all EOL planning questions, 24 % ( $n = 1199$ ) experienced a qualifying parent loss. Respondents were asked these parent loss questions if at least one parent died less than 10 years, but more than 6 months, prior to data collection, without a concurrent spouse loss. Respondents with a concurrent spouse loss in this time frame were asked questions about their spouse's death instead of the parental death, and thus were ineligible for this study.

## Dependent Variable

### *Adult Child's End-of-Life Planning Actions*

An adult child's EOL planning was defined as informal and formal plans regarding medical treatment toward the end of one's life and as formal financial plans related to one's estate settlement. An index was computed by summing six dichotomous EOL questions ( $\alpha = .81$ ). The six questions composing the EOL index were: (a) Have you made any preparations for the end of life? (b) Have you made plans about the types of medical treatment you want if you become seriously ill in the future? (c) 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. (d) Do you have a living will or an advance directive, which is written instructions about the type of medical treatment you would want to receive if you were unconscious or somehow unable to communicate? (e) Do you have a signed and witnessed will? and (f) Do you have a revocable trust? Items b through d represented medical planning actions and items e and f represented financial planning actions. Higher adult child's EOL index scores indicated greater EOL planning. The index mean was 3.63; 46 % of respondents had a score of five or six on the index.

## Independent Variables

### *Adult Child's Environment*

Gender was dummy coded with males coded as "1"; males comprised 47 % of the sample. Marital status was dichotomous; 84 % were married. Number of children, household income and household net worth were continuous variables. About 6 % had no children while about

35 % had one or two, about 42 % had three or four, and about 16 % had five or more. Health self-rating and education level were categorical variables. The average household income in US dollars was \$71,348 and average household net worth in US dollars was \$735,789. Slightly over 52 % completed less than 1 year of college while the remainder completed 1 year or more of college. In a health self-rating, 91 % rated their health as good to excellent.

### *Decision-Making Perception Variables*

**Religiosity and Spirituality** A five-item index was computed to measure participants' identification as religious or spiritual ( $\alpha = .92$ ). Items were scored on a five-point scale (1 = *not at all* to 5 = *extremely*). Items were, "How religious are you?" "How spiritual are you?" "How important is religion in your life?" "How important is spirituality in your life?" and "When you have important decisions to make in your life, how much do you rely on your religious or spiritual beliefs?" Responses to the five items were summed and averaged to produce an index score with a range of one to five. Index mean was 3.46 with a standard deviation of .83.

**Death Ideation** Participants were asked a series of questions relating to their attitudes toward death. A factor analysis indicated that the questions composed two differentiated variables: death ideation avoidance and death ideation acceptance. Two questions were summed to compute a measure of a participants' active avoidance of death thoughts. The Likert scale ranged from 1 = *disagree strongly* to 6 = *agree strongly*. Items were, "I avoid thinking about death altogether" and "Whenever the thought of death enters my mind, I try to push it away." Index mean was 3.09 with a standard deviation of 1.16. Three questions were summed and averaged to measure respondents' passive acceptance of death as a life event. These questions related to participants' beliefs that thoughts of death were not something fearful, and therefore, not worth the energy to actively avoid. The Likert scale ranged from 1 = *disagree strongly* to 6 = *agree strongly*. Items were, "Death is simply a part of life;" "I would neither fear death nor welcome it;" and "Death should be viewed as a natural, undeniable, and unavoidable event." Index mean was 5.16 with a standard deviation of .76.

**Past Experience with Parent's Death** Participants were asked two questions about a parent's death that occurred between 6 months and 10 years prior to data collection. The question "During the last week of your deceased parent's life, how much pain did s/he experience?" was scored on a four-point scale (0 = *no pain* to 3 = *severe pain*). The mean was 1.10 with a standard deviation of

1.03, indicating lower levels of pain. The question “Was your deceased parent able to make decisions during the last week of his/her life?” was dichotomous.

#### *Parent EOL Planning Action Variables*

Participants were asked two dichotomous questions about a parent’s EOL planning. They were “Did your deceased parent have a signed Living Will, giving directions for the kind of medical treatment s/he wanted?” and “Did your deceased parent have a signed Durable Power of Attorney for Health Care, naming someone who could make decisions about his/her medical treatment?”

#### **Data Analysis Plan**

Hierarchical regression required compliance with several assumptions, which this sample met. First, it was verified that error was uncorrelated with predictors and that the variables did not have multicollinearity. Linearity was assessed with curve-fit analysis and by reviewing scatterplot matrices. Finally, the assumption that the residuals were normal was verified with the regression output. No regression assumptions were violated. A priori power analysis was also conducted. With 14 predictor variables, a desired power of .80, and a significance threshold of  $\alpha = .05$ , a sample size of  $n = 135$  would be needed in order to detect a medium effect size ( $f^2 = .15$ ) with a multiple regression analysis (Cohen 1992). Given the present study’s sample size ( $n = 1199$ ), there was sufficient power for the hierarchical regression to detect significant results.

The hierarchical regression proceeded in the order suggested by the analytical model presented in Fig. 1. The adult child environment variables of gender, health self-rating, marital status, number of children, education, household income, and household net worth were entered into the first step of the model. In the second step, the decision-making perception variables of religiosity and spirituality, death ideation avoidance, death ideation acceptance, parent’s pain level, and parent’s ability to decide were entered. Finally, parent’s EOL planning action variables were entered into the model. Performing such an analysis made it possible to evaluate the contribution of variables in each progressive step to the explanation of variance of the adult child’s EOL planning over and above the previously entered variables.

#### **Results**

In the first step of the regression model (Table 2), the adult child’s environment accounted for a six percent of variance in the adult child’s EOL planning,  $F(7, 1191) = 12.01$ ,

$p < .001$ . Thus, Hypothesis 4.1 was supported. Women engaged in greater amounts of EOL planning than men. Married participants, those with higher education, and those with higher household net worth engaged in greater amounts of EOL planning than those who were not currently married, those with lower education, and those with lower household net worth. Household net worth explained the greatest proportion of variance in the adult child’s EOL planning, followed by marital status, gender, and education. The effect of health self-rating, number of children, and household income was not significant. Thus, Hypothesis 1 was only partially supported.

Table 2 indicates that in the second step, 8 % of the variance in the adult child’s EOL planning was accounted for by the combination of adult child’s decision environment and decision-making perceptions  $F(12, 1186) = 9.44$ ,  $p < .001$ . The addition of the variable set of adult child’s decision-making perceptions accounted for an additional two percent of variance in an adult child’s EOL planning above the variance accounted for by the adult child’s decision environment; the change in  $R^2$  was statistically significant when the variable set of adult child’s decision-making perceptions was added to the model, and thus, Hypothesis 4.2 was supported. The adult child’s environment variables that were significant in step 1 remained significant. Adult children with higher levels of death ideation acceptance engaged in greater amounts of EOL planning than those with lower levels of death ideation acceptance. Those with lower levels of death ideation avoidance and those whose parents were unable to make decisions in their last week of life engaged in greater amounts of EOL planning than those with higher levels of death ideation avoidance and those whose parents were able to make decisions in their last week of life. Thus, Hypothesis 2 was partially supported. Death ideation avoidance explained the greatest amount of variance in an adult child’s EOL planning, followed by death ideation acceptance and parent’s ability to decide. Overall, household net worth continued to explain the greatest proportion of variance in an adult child’s EOL planning, followed by death ideation avoidance and marital status.

In step three, effects of an adult child’s decision environment, their decision-making perceptions, and the parent’s EOL planning actions accounted for 10 % of the variance in an adult child’s EOL planning actions  $F(14, 1184) = 10.01$ ,  $p < .001$ . The change in  $R^2$  between Model 2 and Model 3 was 2 % and that change was statistically significant; thus, Hypothesis 4.3 was supported. Previous significant variables remained significant in this step. Parent’s completion of a living will and DPAHC accounted for an additional two percent of variance in the adult child’s EOL planning above the variance accounted for by the adult child’s environment and decision-making



**Table 2** Hierarchical Regression Analysis for Variables Associated with Adult Child’s EOL Planning (n = 1199)

Predictor	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SEB</i>	$\beta$	<i>B</i>	<i>SEB</i>	$\beta$	<i>B</i>	<i>SEB</i>	$\beta$
<b>Adult child’s environment</b>									
Gender (female = 0)	−.34	.11	−.09**	−.28	.12	−.07*	−.25	.11	−.06*
Health self-rating	−.22	.20	−.03	−.24	.20	−.03	−.18	.19	−.03
Marital status	.46	.16	.09**	.48	.15	.09**	.45	.15	.09**
Number of children	.02	.03	.02	.01	.03	.01	.02	.03	.02
Education	.32	.12	.08**	.25	.12	.06*	.25	.12	.06*
Household income	.00	.00	.06	.00	.00	.05	.00	.00	.05
Household net worth	.00	.00	.16***	.00	.00	.17***	.00	.00	.17***
<b>Adult child’s decision-making perceptions</b>									
Religiosity and spirituality				.03	.07	.01	.03	.07	.01
Death ideation avoidance				−.18	.05	−.11***	−.17	.05	−.10***
Death ideation acceptance				.16	.07	.06*	.18	.07	.07*
Parent’s pain level				.04	.05	.02	.03	.05	.02
Parent’s ability to decide				−.22	.11	−.06*	−.23	.11	−.06*
<b>Parent’s EOL planning actions</b>									
Parent’s living will							.62	.13	.16***
Parent’s DPAHC							−.25	.14	−.06
Total $R^2$		.06***			.08***			.10***	
$\Delta R^2$					.02***			.02***	

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

perceptions. Adult children whose parents completed a living will before death engaged in higher amounts of EOL planning than those whose parents did not complete a living will; however, having a parent with a DPAHC was not significant. Thus, Hypothesis 3 was partially supported. In step 3 of the regression, household net worth continued to explain the greatest proportion of variance in an adult child’s EOL planning, followed closely by a parent’s completion of a living will.

**Discussion**

This study contributes to the literature in three ways. First, it investigated the influence of the parent/child context in the EOL planning decisions of adult children. As hypothesized, utilizing an FDMT foundation and past literature on EOL planning, an adult child’s decision environment, their decision-making perceptions, and their parents’ EOL planning actions influenced the EOL planning actions of the adult child. Furthermore, controlling for the adult child’s decision environment, an adult child’s decision-making perceptions predicted significantly more variance in their EOL planning actions over the amount of variance explained by the environmental variables. And, controlling

for both these aspects, the variance explained by the parents’ EOL planning actions further explained the actions of their children.

Although past literature focused on spousal influence in EOL planning actions, this study indicated that another dimension of family needs to be considered—that of parent/child influence. Further, it is not just the characteristics of the adult child that make a difference in their EOL planning actions; their experiences with their parents’ deaths and their parents’ EOL planning actions also contribute to their EOL decisions. The results from this study further supported the fact that EOL planning is not only a cognitive decision but a relational one, as well. While the adult child’s household net worth was the greatest contributor in the explanation of variance of the adult child’s EOL planning actions, their parents’ completion of a living will had an equal weight in explaining this variance. The adult child’s death ideation avoidance was also important to explaining the variance in their EOL planning actions.

A second contribution of this study to the literature is its theoretical grounding in FDMT. Much of past research was atheoretical or only implicitly theoretical, whereas this study’s analytical model was quite closely linked to Rettig’s theoretical concepts and assumptions. Conceptual precision differentiated various dimensions of the decision-

making process—the decision environment, the perceiving phase of decision-making, and decision implementation. Although this study is the first attempt using this conceptual differentiation investigating adult child EOL planning actions in a parent/child context, it creates a conceptual landscape to further examine gaps in EOL planning actions.

The third contribution of this study is the use of an integrated measure of medical and financial planning actions as its dependent variable. This approach created a closer match to practice because these two actions may often be completed in tandem (Su 2008). In practice, accomplishing medical and financial EOL planning simultaneously is both efficient and effective, which could guide education and policy development related to EOL planning actions.

One limitation of this study is that the results of any study utilizing data from the public use data set of the WLS are only representative of White, non-Hispanic Americans with at least a high school education and thus may only be generalizable to this population. Another limitation is not being able to include the conditions around the parental death. Although all participants experienced a parental loss, this study did not capture whether the parent died after an acute or prolonged illness. Such information might affect the adult child's perceptions in making his or her own end-of-life decisions. Future research addressing a different question could incorporate this information and results could be compared to this study.

### Practical Implications of the Present Study

Because household net worth accounted for the greatest amount of variance in the adult child's EOL planning, this points toward other ways, beyond EOL planning, that those with higher net worth differ from those with lower net worth. If those with lower net worth have less access to professionals who advocate for the completion of EOL planning, such as financial planners, lawyers, or informed medical professionals, this indicates a gap that can be addressed by practitioners. Lee (2000) noted that those who have a financial advisor are more likely to have a will, highlighting the association between practitioners' work and EOL planning actions.

Practitioners should advocate for a more unified EOL planning approach since the literature indicated that medical and financial EOL planning are often completed in tandem (Su 2008). However, if those with lower net worth have less access to professionals, they might be doubly disadvantaged if they are less likely to complete both medical and financial EOL planning (Carr 2012c). Some EOL planning documents, especially medical documents, may be completed without legal assistance, while others,

such as a trust, require legal assistance. Determining which documents can be completed without professional assistance and how to access trustworthy planning tools may be difficult, especially due to variability in state laws.

If practitioners across disciplines present a more unified approach to EOL planning, perhaps more people would engage in EOL planning. For example, financial advisers, who are accustomed to discussing financial EOL planning with clients, might also discuss medical EOL planning. Similarly, hospital social workers, who are accustomed to discussing medical EOL planning with patients and their families, might discuss financial EOL planning, as well. This integrated approach is one alternative to large-scale initiatives that may not have successfully increased the completion rates of EOL planning. For example, the integrated model has been explored at least on a cursory level: one cancer institute incorporated “medical-legal partnerships” between hospital social workers and a legal referral service to increase access to and completion rates of both medical and financial EOL planning, as part of a comprehensive palliative care program (Rodabaugh et al. 2010).

Because death ideation avoidance accounted for a significant amount of variance in the adult child's EOL planning, this may indicate that a relationship exists between a person's psychological orientations and his or her EOL planning actions. Practitioners could advocate for greater understanding and acceptance of human mortality. In spite of Americans being branded in popular culture as a “death denying” and “death defying” society (Fulton 1964), the veracity of this label is debatable. Regardless of whether American society actively avoids discussions of death, those with higher levels of death ideation avoidance might benefit from a continued public discussion of EOL planning (Field and Cassel 1997; Zimmerman 2007). As Zimmerman (2007) noted, “There is in contemporary Western society a public interest in the control of the dying process and this control may be achieved by bringing death into discourse, by increased talk about death and dying” (p. 310).

The discourse itself may change as funeral rituals change. A shift in consumer attitudes has sparked a rise in so-called “celebrations of life,” in lieu of traditional, somber funeral rituals. Rather than gathering in a dimly-lit funeral parlor and listening to tearful eulogies and organ music, bereaved families today are increasingly opting for highly personalized, joyful celebrations that shift focus away from the death experienced and onto the life lived (Dillman 2011; Joachim 2012; Stansbury 2013; Thomas 2012). Perhaps death ideation avoidance may be ameliorated by shifting focus from the death to the experience of a life well lived. If discussions of death can be reframed in this way, people may engage in greater levels of EOL planning.

Many more variables, especially those relating to the quality of the parent–child relationship, could be included in future research to present a clearer picture of the factors associated with greater EOL planning among adult children. More than simply focusing on the decision context of parents and children, future research might focus more specifically on dimensions of the parent–child relationship, dimensions of parents’ deaths, or the timing of an adult child’s EOL decision-making compared to the timing of their parent’s death. For example, the quality of the parent–child relationship or the perceived closeness between parents and children could have an association with EOL planning. Further, other dimensions of parents’ deaths, such as the perceived suddenness of the death, or the perceived efficacy of planning tools completed by parents, may have some association with adult children’s EOL planning activities. The impact of the parent–child relationship might also be more clearly identified by comparing children who have lost a parent with those whose parents are still living. Future research will help us learn more about the crucial role that parents play in their adult children’s lives as they age and plan for the end of life.

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#### Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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