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## Trait Hope and Preparation for Future Care Needs among Older Adult Primary Care Patients

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### Abstract

We examined associations between trait hope and preparation for future care needs (PFCN) among 66 older adult primary care patients in western New York. Participants completed a questionnaire assessing PFCN (awareness, information gathering, decision-making, concrete planning, and avoidance), and the Adult Trait Hope Scale. In multivariate regressions, lower hope, particularly less agency, was associated with more awareness of needing care, whereas higher hopefulness, particularly pathways thinking, was associated with increased decision-making and concrete planning. Greater hopefulness appears to be linked to goal-directed planning behaviors, although those with lower hope may actually be more aware of the need for planning. Evidence-based programming that encourages learned hopefulness may contribute to enhanced health planning and decision-making among older adult primary care patients.

### Keywords

Older adults; trait hope; preparation for future care needs; goal-directed behavior

### Introduction

Older adults are at increased risk for illness and functional impairment, factors that may intensify the need for assistance with daily activities. Planning proactively can help ensure that health and care plans are in place, thereby optimizing the potential for healthy aging outcomes (Greenglass & Fiksenbaum, 2009; Kahana, Kahana, & Zheng, 2005).

Several studies have linked preparation for future care needs (PFCN), a goal-directed, proactive planning process, to improved health and well-being in older adults (Sörensen, Mak, Chapman, Duberstein, & Lyness, 2011; Sörensen & Zarit, 1996). PFCN is

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conceptualized as a series of planning steps, from least to most concrete and includes awareness of risk of needing care, gathering information about future care needs, deciding on future care preferences, and making concrete plans for future care needs (Sørensen et al., 2011). Despite the benefits of having health and long-term care plans in place, many older adults fail to make advance plans, perhaps due to differences in individual-level social and cognitive characteristics (Sørensen, Duberstein, Chapman, Lyness, & Martin, 2008).

Certain trait dispositions, such as hope, may play an important role in appraising and responding to potential changes in the environment (Schwarzer & Luszczynska, 2008), processes which contribute to planning and goal-directed behaviors. Hope, which is central to the formulation of human motivation (Snyder et al., 1991), is conceptualized as “the process of thinking about one’s goals along with the motivation to move toward those goals (agency), and the ways to achieve those goals (pathways)” (Snyder, 1995, p. 355). As such, hope may enable individuals to approach health-related problems with drive (agentic thinking) and the capacity to devise a workable plan (pathways thinking) (Snyder et al., 1991). Indeed, the presence of hopefulness has been linked to positive mental and physical health outcomes in older adults (Duggleby et al., 2007). Despite these benefits, hopefulness in very high levels may actually lead to some risk. For example, unrealistic hope may cause individuals to ignore anxiety-producing health information, inaccurately appraise environmental triggers, and underestimate personal risk (Folkman, 2010).

To date, few studies have examined the association between trait hope and proactive planning among older adults (Davison & Simpson, 2006; Lopes & Cunha, 2008), the focus of the current study. Using a sample of older adult primary care patients, we hypothesized that trait hope would have a significant, positive association with gathering information about future care needs, deciding on future care preferences, and making concrete plans for future care needs, and would have a significant, negative association with awareness of risk of needing care and active avoidance of future care planning.

## Methods

### Participants and Procedures

Adults aged 65 years and older were recruited at primary care and medical clinics in western New York as part of a larger IRB-approved 5-year prospective study (Hirsch, Sirois, & Lyness, 2011; Sanders, Lyness, Eberly, & Caine, 2006; Seaburn, Lyness, Eberly, & King, 2005). Participants provided written consent and completed a comprehensive survey battery. Medical records were reviewed and rated by a physician-investigator (JML), yielding assessments of functional ability and illness burden. Research staff administered a comprehensive demographics questionnaire assessing, among other characteristics, age, sex, race/ethnicity, and level of education. Of the 749 who gave their consent to participate in the study (approximately 1,500 were recruited in the original study; 49.93% participation rate), 66 individuals completed the PFCN questionnaire and Trait Hope Scale (THS) which were introduced in the final year of the study, resulting in fewer available participants. Of the 66 subjects in our sample, 95.5% (N = 63) were White and nearly two-thirds (63.6%; N = 42) were female. The mean age was 73.85 (SD=5.09), and mean education level was 15.35 years (SD=1.77).

As we have reported elsewhere (Sanders et al., 2006), due to the Health Insurance Portability and Accountability Act, we do not have complete information on non-enrolled participants; however, those who consented to participate did not differ from non-enrolled patients on age, sex or level of depressive symptoms, as assessed by the 15-item Geriatric Depression Scale (Sheikh & Yesavage, 1986).

## Measures

The PFCN Process Measure (Sörensen, Duberstein, Chapman, & Pinquart, 2008) is a multi-dimensional assessment of planning for future care needs, consisting of 15-items grouped in five subscales with three items each. Subscales include: awareness of risk of needing care (consideration of one's future care needs; ex. "I pay attention to information in the media on the risks of needing help or care in old age"), gathering information about future care needs (talking to relatives or healthcare professionals about care options, ex. "I have compared different options for obtaining help or care in the future"), deciding on future care preferences (deciding on the types of assistance and help one may want or need in the future, ex. "I know what options for care I don't want"), making concrete plans for future care needs (actively planning for obtaining assistance in the future such as communicating care preferences to family, ex. "I have written down my preferences for care"), and active avoidance of future care planning (not considering possible health problems or care needs that may arise in the future, ex. "I don't like to think about the risk of needing help or care in the future").

Each item uses a 5-point response scale, from 1 (not at all true of me) to 5 (completely true of me). The PFCN has exhibited good psychometric properties in prior studies with older adults (e.g.,  $\alpha > 0.68$ ) (Sörensen et al., 2008); in the current study, Cronbach's alphas ranged from 0.55 to 0.78. Higher scores indicate greater engagement in planning processes for all PFCN subscales except the active avoidance of future care planning.

The Trait Hope Scale (THS; Snyder et al., 1991) was designed to assess dispositional hope via 8 items comprising two subscales (4 items each): agentic and pathways thinking. All items used a 5-point response scale, from 1 (I disagree a lot) to 5 (I agree a lot); greater THS scores reflect higher levels of trait hope. The overall hope scale and THS subscales have demonstrated good psychometric properties in older adult samples (Hirsch, Sirois, & Lyness, 2011); in the present study, Cronbach's alphas were 0.88 for the overall hope scale and 0.77 (agentic thinking) and 0.88 (pathways thinking) for subscales.

The Karnofsky Performance Status Scale (KPSS; Karnofsky & Burchenal, 1949) is a physician-rated scale ranging from 0 – 100, and is used to quantify degree of illness-related functioning. This measure has demonstrated good construct validity when compared to other measures of older adult functional ability ( $p < 0.05$ ; Crooks, Waller, Smith, & Hahn, 1991). Higher KPSS scores reflect greater functional ability.

The Cumulative Illness Rating Scale (CIRS; Linn, Linn, & Gurel, 1968) is a physician-rated measure of medical illness burden due to the presence of disease, assessed across thirteen major organ systems. Disease severity is rated on a 5-point scale, from 0 (none) to 4 (extremely severe). The CIRS has demonstrated good concurrent validity with other

comorbidity measures in prior research (e.g.,  $r > 0.40$ ; Extermann, Overcash, Lyman, Parr, & Balducci, 1998), and in the current study (KPSS and CIRS correlation coefficient = 0.59,  $p < .05$ ). Reverse coding was used so that higher scores indicate better health.

### Statistical Analyses

Pearson bivariate correlation was used to assess association between study variables; no bivariate correlations met criteria for multicollinearity ( $r > 0.80$ ; Tabachnick & Fidell, 2001). One multivariate outlier was detected with Grubb's extreme studentized deviate method (Barnett & Lewis, 1998) and subsequently removed, leaving 65 cases. Multivariate linear regression was used to examine the association of hope with PFCN. Covariates included age, sex, race/ethnicity, education, illness-related functioning, and medical illness burden. Separate regression analyses examined the relationship of hope overall and the subscales with each PFCN process. In our small-scale, largely-exploratory study (Huberty, 1987), an alpha level of .10 (two-tailed) was used for all statistical tests. Baghi, Noorbaloochi, and Moor (2007) have argued that this is an acceptable approach when the consequences of rejecting the null hypothesis would not be serious. All analyses were performed with statistical software, PASW version 18.0 (IBM SPSS, Chicago, Illinois).

### Results

The mean score and standard deviation (SD) was calculated for each measure. The mean PFCN scores, prior to mean-centering and rescaling, were: awareness of risk of needing care (2.85; SD = 0.89); gathering information about future care needs (2.56; SD = 1.04); deciding on future care preferences (3.16; SD = 0.98); making concrete plans for future care needs (2.49; SD = 0.95); and, active avoidance of future care planning (2.81; SD = 0.77). The mean overall hope score was 32.86 (SD = 4.77), and mean pathways and agentic thinking scores were 15.86 (SD = 2.98) and 17.0 (SD = 2.42), respectively. The mean score on the KPSS was 77.86 (SD = 11.39) and the mean score on the CIRS was 9.91 (prior to reverse coding), with a SD of 2.92. Current study mean scores for the PFCN (Hirsch, Siros, & Lyness, 2011; Sörensen et al., 2008), THS (Snyder et al., 1991), CIRS (Chapman, Lyness, & Duberstein, 2007; Hudon, Fortin, & Vanasse, 2005), and KPSS (Chapman et al., 2009) were similar to those reported in other primary care studies.

At the bivariate level, study hypotheses were only partially supported: greater total hope scores ( $r = 0.31$ ,  $p < 0.05$ ), as well as greater agentic thinking subscale scores ( $r = 0.42$ ,  $p < 0.01$ ), were significantly correlated with less awareness of risk of needing care. Gathering information about future care needs was negatively correlated with total hope scores, a finding opposite the expected direction. Making concrete plans for future care needs was positively, but not significantly, related to total hope scores. Other hypothesized relationships were in the predicted direction, but were also non-significant.

In multivariate analyses, we found partial support of our hypotheses: the agentic thinking subscale score was inversely associated with awareness of risk of needing care ( $B = -0.11$  [SE = 0.04],  $p = 0.01$ ) (Table 1); however, we found no significant relationship between gathering information about future care needs and total hope (or its subscales).

We expected older adults' decision making to be related to greater total hope scores and this was supported: overall total hope ( $B = 0.05$  [SE = 0.03],  $p = 0.05$ ), as well as the pathways thinking subscale ( $B = 0.09$ , [SE = 0.04],  $p = 0.03$ ), had a positive association with deciding on future care preferences (Tables 2 and 3). With regard to making concrete plans for future care needs, there was a main effect for total hope ( $B = 0.05$  [SE = 0.03],  $p = 0.04$ ] (Table 1), as well as its subscale of pathways thinking ( $B = 0.08$  [SE = 0.04],  $p = 0.06$ ); both were positively associated with making concrete plans for future care needs. Active avoidance of future care planning was not significantly related to hopefulness.

Finally, we found a main effect for illness-related functional ability, which was inversely correlated with deciding on future care preferences and making concrete plans for future care needs (See Table 1). Older adults with higher functioning were less likely to engage in decision-making ( $B = -0.03$  [SE = 0.01],  $p = 0.02$ ) and concrete planning ( $B = -0.04$  [SE = 0.01],  $p = 0.01$ ), to prepare for their future care needs.

## Discussion

We examined the association between hope and PFCN in a sample of older adult primary care patients. In support of our hypotheses, we found that higher levels of hope were associated with less awareness of risk of needing care but greater decision-making about future care preferences. Greater hopefulness was also associated with more concrete planning about future care needs, a finding similar to those reported by Felder (2006). Thus, lower levels of hopefulness may deter planning, supporting previous research (Sörensen, Hirsch, & Lyness, 2014). It appears that resiliency-promoting psychosocial resources, such as optimism and hope, may contribute to engagement in proactive coping, an important process underlying the PFCN model (Sörensen, Duberstein, Chapman, Lyness, & Martin, 2008).

One of our most interesting findings was that the ability to plan ways to reach goals (pathways thinking) contributed to the decision-making and planning process more robustly than the ability to identify appropriate and meaningful future goals (agentic thinking). In the absence of such goal-directed motivation, individuals may be more acutely aware of future risks but may not actively engage in health or care planning behaviors. Pathways thinking may also operate like a self-regulatory process, aiding in the prioritization of tasks and goals (Carver & Connor-Smith, 2010). Thus, our findings suggest that the ability to problem-solve toward goal-attainment, including development of strategies to circumvent potential barriers, represents an important process underlying engagement in PFCN for older adults.

Further, higher agentic thinking, or one's appraisal of capability of attaining a goal, was associated with less awareness of risk of needing care. One possible explanation for this apparent paradox is that older adults who experience greater hope may attach less meaning to situational or other contextual factors that typically signal changes in health or the ability to perform everyday activities (Carver & Connor-Smith, 2010). In other words, older adults with greater hopefulness may perceive changes in health or care needs as temporary or as rarely interfering with normal activities.

Our novel findings must be interpreted within the context of a number of limitations including our cross-sectional design, which precludes examination of causality. As such, bi-directionality is a possibility; for instance, older adults who engage in future care planning may be more hopeful as a result. Although perhaps expected as a result of its brevity, the PFCN measure had less than desirable internal consistency. Our small sample size may have offered inadequate statistical power to detect significance, and our findings should be replicated in a larger sample. Homogeneity of our sample makes it unclear whether these findings are generalizable to other older adult populations. Inclusion of diverse ethnic and socioeconomic groups is important in studies assessing PFCN, as socioeconomic disadvantage and minority status are often related to poor health knowledge and reduced access to care services (Bradley et al., 2002).

## Conclusions and Implications for Clinical Practice

Despite these limitations, our findings underscore the potential importance of hope in explaining the variability of engagement in future care planning and, therefore, may have clinical implications. Healthcare professionals should consider patients' intrapersonal characteristics, particularly ability to identify and enact meaningful health goals, when encouraging and developing future care plans. Importantly, empirical research has demonstrated that hope can be bolstered in both healthy and clinically compromised older adults (Duggleby et al., 2007). Successful psychosocial interventions to bolster hope have focused on goal imagery, cognitive reframing, and decisional control (Duggleby et al., 2007). Therapeutic public health or individual-level programs to increase hopefulness may, in turn, effectively change self-management strategies and one's capacity to execute goal-directed behaviors, factors associated with improved well-being (Duggleby et al., 2007).

Clinicians can play an integral role in enhancing future care planning among older adults by recognizing the role of psychological factors in planning behaviors. Clinicians can collaborate with interdisciplinary healthcare teams to provide additional or tailored assistance to those for whom setting care and health goals may present more of a challenge. Collaboration with the client, family members, and caregivers is integral to coordinating the care of older adults, and is therefore, an essential component of future care planning. Clinicians can provide education to their older clients and support members about the importance of having care plans in place.

The Centers for Medicare and Medicaid Services' recent proposal to reimburse clinicians for having advance care planning conversations with patients (National Archives and Records Administration, 2014) represents a key step forward in acknowledging the importance of proactive planning (Institute of Medicine, 2014). Continued advocacy is needed, however, to educate the public about the importance of adopting a comprehensive approach to planning for the future (e.g., living preferences, care options, and estate planning). Planning proactively can enhance the quality of services provided along the continuum of care to older clients. In conclusion, we found that hope appears to be an important contributor to preparing for future care needs in older adult primary care patients, and may be easily addressed in the primary care setting as a means of engaging patients in their future care preparations.

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**Table 1**

Multiple Regression of Association between Agentic Thinking and Awareness of Risk of Needing Care

Awareness of Risk of Needing Care			
Predictors	<i>B</i>	SE <i>B</i>	<i>t</i>
Agentic Thinking	-.11	.04	-2.56*
Age	.03	.02	1.56
Sex	-.01	.22	-.02
Race/Ethnicity	.10	.50	.20
Education	-.06	.06	-.93
Illness-Related functioning	-.02	.01	-1.59
Medical illness burden	.00	.04	.05
<i>F</i> -value regression model	<i>F</i> (7, 57) = 3.5, <i>p</i> = .003		
<i>R</i> <sup>2</sup>	22%		

Note: sex; 1 = female, 2 = male; SE = standard error.

^  
*p* < .10;

\*  
*p* < .05;

\*\*  
*p* < .01.

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**Table 2**  
Multiple Regression of Association between Trait Hope and Decision Making and Concrete Planning

Predictors	Deciding on Future Care Preferences			Making Concrete Plans for Future Care Needs		
	B	SE B	t	B	SE B	t
Hope	.05	.03	2.00 <sup>^</sup>	.05	.03	2.09 <sup>*</sup>
Age	.01	.02	.38	.02	.02	.63
Sex	-.47	.25	-1.88	-.17	.24	-.68
Race/Ethnicity	-.34	.57	-.60	-.12	.56	-.22
Education	.13	.07	1.84	-.00	.07	-.03
Illness-Related functioning	-.03	.01	-2.33 <sup>*</sup>	-.04	.01	-2.86 <sup>**</sup>
Medical illness burden	.01	.05	.24	.01	.05	.12
F-value regression model	F(7, 57) = 2.8, p=.01			F(7, 57) = 2.5, p=.02		
R <sup>2</sup>	17%			14%		

Note: sex; 1 = female; 2 = male; SE = standard error.

<sup>^</sup> p < .10;

\* p < .05;

\*\* p < .01.

Multiple Regression of Association between Pathways Thinking and Decision Making and Concrete Planning

Table 3

Predictors	Deciding on Future Care Preferences			Making Concrete Plans for Future Care Needs		
	B	SE B	t	B	SE B	t
Pathways Thinking	.09	.04	2.20*	.08	.04	1.94 <sup>^</sup>
Age	.01	.02	.52	.02	.02	.69
Sex	-.48	.25	-1.92 <sup>^</sup>	-.17	.25	-.68
Race/Ethnicity	-.30	.57	-.53	-.12	.56	-.21
Education	.15	.07	2.14*	.02	.07	.26
Illness-Related functioning	-.03	.01	-2.24*	-.03	.01	-2.71**
Medical illness burden	.01	.05	.24	.00	.05	.08
F-value regression model	F(7, 57) = 3.0, p=.01			F(7, 57) = 2.4, p=.03		
R <sup>2</sup>	18%			14%		

Note: sex; 1 = female, 2 = male; SE = standard error.

<sup>^</sup> p < .10;

\* p < .05;

\*\* p < .01.