Living longer with help from others: Seeking advice lowers mortality risk

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Abstract

Associations between self-sufficiency and advice seeking with mortality risk were examined to assess the long-term implications of individualistic and interpersonally oriented strategies. Wave 1 participants from the National Survey of Midlife Development in the United States ($N = 6116$, 25–75 years, $M_{age} = 46.38$ years) completed questionnaires assessing demographics, self-sufficiency, advice seeking, social support, and health. Cox proportional hazard models indicated that each standard deviation increase in seeking advice was associated with an 11 percent decreased hazard of dying 20 years later. Self-sufficiency was not significantly related. Future research should examine contexts in which interpersonal strategies are adaptive, as seeking advice from others promotes longevity.

Keywords

advice seeking, dependence, independence, mortality, social support

Introduction

When confronted with everyday problems and decisions, does being self-sufficient facilitate health and longevity? What about advice seeking? It is unknown whether the strength of the association between these approaches and longevity differs. Tested separately, advice seeking promoted greater well-being (Curran et al., 2010) and has been suggested to facilitate successful aging (Rowe and Kahn, 1997) and longevity. Self-sufficiency had the opposite effect (Bookwala and Fekete, 2009), despite Western societies, such as the United States valuing independence and self-sufficiency (Baltes, 1996; Kitayama et al., 2009; Markus and Kitayama, 1991). Often, independence and self-sufficiency

and dependence on others (e.g. seek advice) are viewed as opposite ends of a single continuum (e.g. Cross et al., 2000; Rubin et al., 2012), which does not acknowledge that individuals can be self-sufficient *and* seek advice. This study simultaneously tested self-sufficiency (i.e. autonomous and self-regulatory actions) and advice

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seeking as predictors of mortality risk across a 20-year follow-up period.

Individualistic and interpersonal strategies and longevity

Everyday coping strategies can be individualistic, involving only the self, and interpersonal and relational, such as when couples solve problems together (Berg et al., 1998). Most research has focused on individuals solving problems and making decisions alone, but researchers have started to emphasize interpersonal approaches (e.g. Queen et al., 2015; Strough et al., 2002; Strough and Keener, 2014; Yaniv, 2004). A recent study showed systematic individual differences in the extent to which people endorsed a "dependent" style of involving others through seeking advice versus a more independent style of making decisions alone (Delaney et al., 2015). However, the long-term implications of such differences for mortality risk are unknown.

Although links between mortality risk, advice seeking, and self-sufficiency have not been investigated before, the social support literature has investigated related ideas (see reviews by Berkman et al., 2000; Shor et al., 2013; Uchino, 2009). Research on social support assesses individuals' *perceptions* of available or received emotional, instrumental, or informational support (Barrera, 1986; Weiss, 1974). Advice seeking, a form of informational support, entails receiving facts, opinions, and feedback from others (Cohen and McKay, 1984; Thoits, 2011; Weiss, 1974).

Studies of perceived and received support in relation to mortality risk showed that *perceived* support was associated with *lower* mortality rates (e.g. Berkman et al., 1992; Blazer, 1982; Brummett et al., 2001), whereas *received* support was inconsistently associated with *higher* mortality rates (see Uchino, 2009, for review). The negative effect of received support could be related to support being viewed as less nurturing and too controlling (Rook, 1998; Trobst, 2000). This could reduce feelings of independence and

self-esteem (Bolger et al., 2002). Focusing on *seeking* support and comparing it to preferences to remain independent and self-sufficient offers a new framework for understanding interpersonal dynamics and longevity.

This study tested the relative importance of advice seeking and self-sufficiency for predicting mortality risk 20 years later when accounting for demographic variables and health status. Social support was included to ensure that advice seeking is distinct from perceived support.

Method

Participants

Data were from Wave 1 of the National Survey of Midlife Development in the United States (MIDUS; Brim et al., 2004). From 1994 to 1996, English-speaking adults (ages 25–75 years) were recruited via telephone using random-digit dialing, and 7108 were administered both a phone and self-administered survey. Our sample included 6116 adults ($M_{age} = 46.38$ years, standard deviation (SD) = 13.00 years; 48.3% male) who were mostly Caucasian (91%), married (67.5%), and had a median education level equivalent to 1–2 years of college. Approximately 86 percent of the original sample completed measures relevant to this study.[1] These participants were significantly more likely than the original sample to be female ($\chi^2 = 15.20, p < .001$), White ($\chi^2 = 8.16$, $p = .004$), married ($\chi^2 = 15.20$, $p < .001$), have more education ($t = 8.50$, $p < .001$), better self-rated health ($t = 2.95$, $p = .003$), fewer functional limitations ($t = -4.97$, $p < .001$), report higher total support ($t = 2.61$, $p < .009$), and greater advice seeking ($t = 2.64$, $p = .008$) but did not significantly differ in age, number of chronic illnesses, or self-sufficiency.

Measures

Demographics. All models accounted for age, gender (0 = *male*, 1 = *female*), race (0 = *White*, 1 = *minority*), education, and current marital status (0 = *married*, 1 = *not married*).

Health indices. We used three measures to adjust for health at baseline (MIDUS 1): participants' ratings of their current physical health (1 = *poor*, 5 = *excellent*), their ratings of functional limitations (1 = *not at all*, 4 = *a lot*) averaged across nine different activities (e.g. lifting or carrying groceries and climbing stairs), and a count variable based on self-report of 29 chronic health conditions experienced within the past 12 months (e.g. arthritis and lung problems)—higher scores indicated a greater number of chronic illnesses.

Social support. Participants rated supportiveness (1 = *not at all*, 4 = *a lot*) of friends (four items; α = .88), family (four items; α = .82), and their spouse or partner (six items; α = .86). Example items included the following: "how much does your (partner/friend/family) care about you?" and "how much do they understand the way you feel about things?" We averaged ratings across the three sources of support to create an overall social support index.

Self-sufficiency. A four-item scale assessed self-sufficiency (1 = *a lot*, 4 = *not at all*). Items included the following: "I don't like to ask others for help unless I have to," "I would rather deal with my problems by myself," "I don't let others know when things aren't going well for me," and "asking others for help comes naturally for me." The first three items were reverse coded; higher average scores indicated greater self-sufficiency (α = .67).[2]

Advice seeking. A three-item scale assessed advice seeking (1 = *a lot*, 4 = *not at all*). Items included the following: "I like to get advice from others before making a decision," "when I'm upset about something, I feel better after I talk to others," and "I prefer to make decisions without input from others." The first two items were reverse coded; higher average scores indicated greater advice seeking (α = .60).

Mortality data. Mortality data were retrieved from the most recent National Death Index reports conducted by the MIDUS study team.

From January 1995 through the censored end date of October 2015, 1099 participants with full data were identified as deceased.

Analytic plan

Four Cox proportional hazard models were estimated to assess self-sufficiency and advice seeking, first separately in relation to mortality risk and then both simultaneously. A final model accounted for both simultaneously, and social support, to ensure that advice seeking is not a proxy for social support. To assess survival rates, a delayed entry model method was used where age at baseline and age of death was the time metric (age at censor date was used for those alive at the end of the follow-up). The delayed entry model adjusted for the varying ages of entry into the study. Continuous variables were transformed into SD units prior to analyses to ease interpretability of hazard ratios (HRs).[3]

Results

Table 1 presents descriptive statistics. The four Cox proportional hazard models are shown in Table 2. For all models, being female, married, having greater education, greater self-rated health, and fewer functional limitations were associated with a decreased hazard of dying across the 20-year follow-up (see Table 2).[4] For Model 1, self-sufficiency did not significantly predict mortality risk. Model 2 showed a significant association between advice seeking and mortality risk. For every SD increase in advice seeking, there was a 10 percent reduction in the hazard of dying. In Model 3, with covariates and main variables of interest included, self-sufficiency did not significantly predict mortality risk.[5] Findings indicated that each SD increase in advice seeking was associated with an 11 percent reduced hazard of dying. In Model 4, when including social support, results remained consistent with Model 3. No significant interactions between covariates, social support, and advice seeking were found after conducting additional analyses.

Table 1. Descriptive statistics and correlations.

Variable	M (SD) or %	1	2	3	4	5	6	7	8	9	10	11
Age	46.38 (13.00)	—										
Gender (male)	48%	.02	—									
Race (White)	91%	-.10**	.03	—								
Marital status (married)	68%	.06**	-.11**	-.11**	—							
Education	6.77 (2.49)	-.10**	-.10**	-.04**	.03*	—						
Self-rated health	3.53 (0.99)	-.16**	-.03*	-.07**	.07**	.25**	—					
Functional limitations	1.48 (0.69)	.28**	.13**	.05**	-.09**	-.22**	-.50**	—				
Chronic illness	2.41 (2.51)	.18**	.12**	.02	-.09**	-.13**	-.41**	.44**	—			
Self-sufficiency	3.06 (0.64)	.03*	-.05**	.01	-.06**	-.11**	-.08**	.06**	.06**	—		
Advice seeking	2.72 (0.67)	-.06**	.05**	-.05**	.03*	.12**	.09**	-.06**	-.01	-.36**	—	
Total social support	3.39 (0.48)	.08**	.09**	-.06**	-.12**	.04**	.17**	-.11**	-.14**	-.18**	.21**	—

SD: standard deviation.
*p < .05; **p < .01.

Table 2. Cox regression models with mortality as outcome.

Predictors	Model 1	Model 2	Model 3	Model 4
	Hazard ratio (95% CI)	Hazard ratio (95% CI)	Hazard ratio (95% CI)	Hazard ratio (95% CI)
Gender (male)	0.58 (0.51–0.66)**	0.58 (0.51–0.66)**	0.58 (0.51–0.66)**	0.58 (0.51–0.66)**
Race (White)	1.01 (0.81–1.26)	1.00 (0.80–1.25)	0.99 (0.80–1.25)	0.99 (0.80–1.25)
Marital status (married)	1.42 (1.24–1.61)**	1.41 (1.24–1.61)**	1.41 (1.24–1.61)**	1.41 (1.23–1.60)**
Education	0.91 (0.85–0.97)*	0.91 (0.86–0.97)*	0.91 (0.86–0.97)*	0.91 (0.86–0.97)*
Self-rated health	0.79 (0.73–0.85)**	0.80 (0.74–0.86)**	0.80 (0.74–0.86)**	0.80 (0.74–0.86)**
Functional limitations	1.29 (1.21–1.37)**	1.29 (1.21–1.37)**	1.29 (1.21–1.37)**	1.29 (1.21–1.37)**
Chronic illness	1.05 (0.99–1.12)	1.06 (0.99–1.12)	1.06 (1.00–1.13)	1.06 (1.00–1.13)
Self-sufficiency	0.99 (0.93–1.06)	–	0.96 (0.89–1.02)	0.95 (0.89–1.02)
Advice seeking	–	0.90 (0.85–0.95)*	0.89 (0.83–0.94)*	0.89 (0.83–0.95)**
Total social support	–	–	–	0.98 (0.92–1.04)
−2 log[a]	14,568.20	14,555.98	14,554.18	14,539.42

CI: confidence interval.

[a]Likelihood ratio statistic; $N = 6110$, n (deceased) $= 1042$.

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

Discussion

Our study offers new insights about the benefits of individualistic versus interpersonally oriented strategies in relation to mortality risk. Even though Western cultural values emphasize independence and self-sufficiency (Kitayama et al., 2009), self-sufficiency was unrelated to longevity in our US sample. However, utilizing others for advice significantly reduced mortality risk by 11 percent, which adds to the literature about the benefits of supportive relationships for successful aging (Rowe and Kahn, 1997) and research on perceived social support (e.g. Berkman et al., 1992). Our findings also suggest that advice seeking may be independent from perceived social support as results did not differ with social support included. Thus, advice seeking appears to distinctly relate to mortality risk 20 years later, even when accounting for important health covariates and social support, whereas self-sufficiency is unrelated to mortality risk.

There are several reasons why seeking advice may reduce mortality risk. Obtaining advice from others is associated with better decision accuracy (Bonaccio and Dalal, 2006),

and good decision making may positively impact health (Bruine de Bruin et al., 2007). Prior research with MIDUS participants showed that seeking advice was associated with enhanced well-being (Curran et al., 2010). Well-being is consistently related to greater longevity (Diener and Chan, 2011). In addition, seeking advice may be a way to compensate for declines in one's own abilities (Strough et al., 2002). In future research, examining the contexts in which advice is sought and personal characteristics associated with advice seeking will be a crucial step to help identify the mechanisms in which advice seeking is a protective factor for longevity.

When interpreting our findings, some limitations common to studies like ours should be acknowledged. First, even though our national sample was randomly selected, it is not representative of the entire US population and therefore the generalizability of our results may be limited. Second, the self-sufficiency and advice seeking measures had relatively low internal consistencies. Including a more comprehensive measure that specifies domains (e.g. financial and health) in which strategies are used (cf. Strough et al., 2002), examines the type of

advice people seek, and perceived usefulness of received advice will benefit future research because the consequences of advice seeking could differ depending on these contextual factors (see Cutrona and Russell, 1990).

To our knowledge, this is the first prospective study to simultaneously test how self-sufficiency and advice seeking relate to mortality risk. Advice seeking, not self-sufficiency, was significantly related to longevity and reduced mortality risk, thus suggesting that *seeking* support can be beneficial (cf. Uchino, 2009). This study highlights the importance of understanding interpersonal processes involved in handling problems and decisions (Queen et al., 2015; Strough and Keener, 2014; Yaniv, 2004) because they appear to be distinct from general social support. Such research will facilitate a better understanding of how to improve quality of life and extend longevity.

Declaration of Conflicting Interests

Funding

Notes

1. Out of the original sample, 14 percent of missing data were due to unreturned or incomplete questionnaires.
2. Other studies that have used self-sufficiency and advice seeking measures from Midlife Development in the United States (MIDUS) in connection to physical and psychological health outcomes include the following: Bookwala and Fekete (2009), Curran et al. (2010), and Park et al. (2013).
3. The assumption of proportionality was tested with self-sufficiency and advice seeking variables. Neither variable violated this assumption.
4. Since choice of time metric can influence results (Chalise et al., 2013), we conducted sensitivity analyses using survival time (duration between MIDUS 1 completion date to the date of each participant's death) as a time metric instead of age. Results did not appreciably differ between the two time metrics (available upon request).
5. Since socioeconomic status (SES) could confound associations, we tested two indices to account for the effects of SES. Income was not significantly related to mortality risk, but higher net worth significantly related to lower mortality risk (hazard ratio (HR) = 0.91; confidence interval (CI) = 0.85–0.98). Importantly, in the fully adjusted model, neither household income (household total of wages, income, social security benefits, and government assistance) nor net worth (amount of money left over after a respondent cashes in savings and sells possessions to pay off loans, debts, etc.) changed the estimate or significance of the advice seeking or self-sufficiency effects.

References

Baltes MM (1996) *The Many Faces of Dependency in Old Age*. New York: Cambridge University Press.

Barrera M (1986) Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology* 14(4): 413–445.

Berg CA, Meegan SP and Deviney FP (1998) A social-contextual model of coping with everyday problems across the lifespan. *International Journal of Behavioral Development* 22(2): 239–261.

Berkman LF, Glass T, Brissette I, et al. (2000) From social integration to health: Durkheim in the new millennium. *Social Science & Medicine* 51(6): 843–857.

Berkman LF, Leo-Summers L and Horwitz RI (1992) Emotional support and survival after myocardial infarction prospective, population-based study of the elderly. *Annals of Internal Medicine* 117(12): 1003–1009.

Blazer DG (1982) Social support and mortality in an elderly community population. *American Journal of Epidemiology* 115(5): 684–694.

Bolger N, Zuckerman A and Kessler RC (2000) Invisible support and adjustment to stress. *Journal of Personality and Social Psychology* 79(6): 953–961.

Bonaccio S and Dalal RS (2006) Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes* 101(2): 127–151.

Bookwala J and Fekete E (2009) The role of psychological resources in the affective well-being of never-married adults. *Journal of Social and Personal Relationships* 26(4): 411–428.

Brim OG, Ryff CD and Kessler RC (2004) *How Healthy Are We? A National Study of Well-Being at Midlife*. Chicago, IL: University of Chicago Press.

Bruine de Bruin W, Parker AM and Fischhoff B (2007) Individual differences in adult decision-making competence. *Journal of Personality and Social Psychology* 92(5): 938–956.

Brummett BH, Barefoot JC, Siegler IC, et al. (2001) Characteristics of socially isolated patients with coronary artery disease who are at elevated risk for mortality. *Psychosomatic Medicine* 63(2): 267–272.

Chalise P, Chicken E and McGee D (2013) Performance and prediction for varying time survival scales. *Communications in Statistics* 42(3): 636–649.

Cohen S and McKay G (1984) Social support, stress, and the buffering hypothesis: A theoretical analysis. In: Baum A, Singer JE and Taylor SE (eds) *Handbook of Psychology and Health*. Hillsdale, NJ: Lawrence Erlbaum Associates, pp. 253–267.

Cross SE, Bacon PL and Morris ML (2000) The relational-interdependent self-construal and relationships. *Journal of Personality and Social Psychology* 78(4): 791–808.

Curran M, Totenhagen C and Serido J (2010) How resources (or lack thereof) influence advice seeking on psychological well-being and marital risk: Testing pathways of the lack of financial stability, support, and strain. *Journal of Adult Development* 17(1): 44–56.

Cutrona CE and Russell DW (1990) Type of social support and specific stress: Towards a theory of optimal matching. In: Sarason BR, Sarason IG and Pierce GR (eds) *Social Support: An Interactional View*. New York: John Wiley & Sons, pp. 319–366.

Delaney R, Strough J, Parker AM, et al. (2015) Variations in decision-making profiles by age and gender: A cluster-analytic approach. *Personality and Individual Differences* 85: 19–24.

Diener E and Chan MY (2011) Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being* 3(1): 1–43.

Kitayama S, Park H, Sevincer AT, et al. (2009) A cultural task analysis of implicit independence: Comparing North America, Western Europe, and East Asia. *Journal of Personality and Social Psychology* 97(2): 236–255.

Markus HR and Kitayama S (1991) Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review* 98(2): 224–253.

Park J, Kitayama S, Karasawa M, et al. (2013) Clarifying the links between social support and health: Culture, stress, and neuroticism matter. *Journal of Health Psychology* 18(2): 226–235.

Queen TL, Berg CA and Lowrance W (2015) A framework for decision making in couples across adulthood. In: Hess T, Strough J and Loeckenhoff C (eds) *Aging and Decision-Making: Empirical and Applied Perspectives*. San Diego, CA: Academic Press, pp. 371–388.

Rook KS (1998) Investigating the positive and negative sides of personal relationships: Through a glass darkly? In: Spitzberg BH and Cupach WR (eds) *The Dark Side of Close Relationships*. Mahwah, NJ: Lawrence Erlbaum Associates, pp. 369–393.

Rowe JW and Kahn RL (1997) Successful aging. *The Gerontologist* 37(4): 433–440. Available at: http://gerontologist.oxfordjournals.org/content/37/4/433.full.pdf

Rubin M, Watt SE and Ramelli M (2012) Immigrants' social integration as a function of approach-avoidance orientation and problem-solving style. *International Journal of Intercultural Relations* 36: 498–505.

Shor E, Roelfs DJ and Yogev T (2013) The strength of family ties: A meta-analysis and meta-regression of self-reported social support and mortality. *Social Networks* 35(4): 626–638.

Strough J and Keener EJ (2014) Goals and strategies for solving interpersonal everyday problems across the life span. In: Verhaeghen P and Hertzog C (eds) *Emotion, Social Cognition and Everyday Problem Solving during Adulthood*. New York: Oxford University Press, pp. 190–205.

Strough J, Cheng S and Swenson LM (2002) Preferences for collaborative and individual everyday problem solving in later adulthood. *International Journal of Behavioral Development* 26(1): 26–35.

Thoits PA (2011) Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior* 52(2): 145–161.

Trobst KK (2000) An interpersonal conceptualization and quantification of social support transactions. *Personality and Social Psychology Bulletin* 26: 971–986.

Uchino BN (2009) Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science* 4(3): 236–255.

Weiss RS (1974) The provisions of social relations. In: Rubin Z (ed.) *Doing Unto Others*. Englewood Cliffs, NJ: Prentice Hall, pp. 17–26.

Yaniv I (2004) Receiving other people's advice: Influence and benefit. *Organizational Behavior and Human Decision Processes* 93(1): 1–13.