THE DEATH OF CONFIDANTS AND CHANGES IN OLDER ADULTS' SOCIAL LIVES

James Iveniuk, PhD
The Dalla Lana School of Public Health, University of Toronto

Peter Donnelly, MD, MPH
Public Health Ontario

Louise Hawkley, PhD
The National Opinion Research Center at the University of Chicago

ABSTRACT

This study examines the consequences of confidant death for the social lives of older adults. We draw upon longitudinal data from the National Social Life Health and Aging Project – a nationally-representative survey of older adults (N=2261). We explore how changes in older adults' social lives are associated with the death of diverse social network members. The death of a spouse, but not the death of a family member or friend, was associated with increased support from friends and family, spending more time with family, and more frequent participation in religious services, but not volunteering. The death of a non-family non-friend confidant was also associated with increased time spent with family. No other associations were significant. Findings regarding spousal death were largely commensurate with socio-emotional selectivity theory. Death of other confidants had little impact on older adults' social lives, suggesting the robustness of their networks to non-spousal loss.

INTRODUCTION

Older adulthood can be a time of considerable change in older adults' social lives. Although mid-century sociological theories of older adulthood described a trajectory towards isolation (Cumming and Henry 1961; Henry and Cumming 1959), more recent work has argued that older adulthood can also be a time of network growth, as individuals transition from a social world dominated by one's workplace, to one of friends, family, and participation in more informal social activities (Atchley 1971; Cornwell, Laumann, and Schumm 2008; Cornwell and Laumann 2013; Lawton 1994). Nevertheless, there is considerable homophily by age in many social networks (McPherson, Smith-Lovin, and Cook 2001), and as individuals age, their confidants may also grow old, become ill, and die. The social consequences of loss are often discussed in the literature on widowhood (Ferraro 1984; Ferraro and Barresi 1982; Guiaux, Van Tilburg, and Van Groenou 2007; Utz, Carr, Nesse, and Wortman 2002; Zettel and Rook 2004), but the loss of friends, family, and other confidants may also be consequential for older adults, and occasion change in their social lives. Furthermore, the consequences of confidant loss may not be felt equally across all domains, as some confidants respond by deepening their connection to the person who has experienced the death of a confidant, while others withdraw, or simply maintain the strength of their connections at existing levels. In this paper, we take up these issues in order to describe the consequences of confidant loss for older adults' social lives, with the aim of describing when (and if) individuals experience decline or growth of their social ties and activities, after the death of confidants.

Socio-emotional factors in the death of a confidant

The field of social gerontology has seen a recent expansion in literature on social relationships and aging, as researchers have worked to produce more-detailed and larger datasets

capable of providing detailed pictures of older adults' social lives (Waite, Cagney, Cornwell, Dale, Huang, Laumann, McClintock, O'Muircheartaigh, and Schumm 2013). This growth in data assets has been accompanied by opportunities to test and refine theories of how older adults' social lives change over time, and which factors are most important for precipitating different kinds of changes. One of the most commonly-employed theories from this current of research has been socio-emotional selectivity theory, which is a social-psychological theory of social network change (Carstensen 1992a; Carstensen 1992b; Carstensen 2006). Briefly, socio-emotional selectivity theory holds that as people reach later life, there is a change in their psychological time horizons, motivating individuals to shed weaker social network ties, and strengthen ties to some confidants, especially family (Carstensen 2006).

The loss of confidants may create a similar shortening of time-horizons, by prompting the recognition that one's own life could similarly end (de Vries and Johnson 2002). If this is the case, then one would expect that individuals who lose confidants may be more likely to decrease their connections to friends and strengthen their connections to family, per the predictions of socio-emotional selectivity theory. Family are also under considerably stronger normative expectations to provide support to fellow family members during times of trouble, when compared to friends (Shor, Roelfs, and Yogev 2013; Waite and Das 2010), and therefore just as individuals may seek out family after the death of a key confidant, people may seek out a fellow family member who has suffered a loss, not waiting for them to ask for support. These same normative expectations may lead the bereaved to be more likely to accept help when it is offered, creating stronger ties with family members after the death of a key person.

Furthermore, individuals may be particularly motivated to seek out religious and spiritual forms of social participation, since the recognition of one's own mortality may lead one towards

narratives that make meaning from the death of a key confidant, which religious organizations may have the capacity to provide (Brown, Nesse, House, and Utz 2004; Krause, Ellison, Shaw, Marcum, and Boardman 2001; McIntosh, Silver, and Wortman 1993). Participation in activities that do not have overt religious meaning, such as volunteering, may assist with replacing the social connection that was lost when the confidant died, however these activities may not necessarily provide the same resources for making sense of a death, when compared to religious organizations.

Death of a spouse, versus friends, family

Importantly the above account describes the deceased person only generically, and not with regard to the kind of relationship that they shared with their confidant. Much of the literature on the death of a confidant focuses on the loss of a spouse, and especially the health consequences of that loss. Because spouses typically provide considerable emotional and instrumental support (Waite and Gallagher 2000), the loss of a spouse is not only potentially traumatic, but also creates a serious deficit in resources. Unless the widow or widower is able to become self-sufficient, or acquire similar supports from elsewhere, the loss of a spouse can seriously damage a person's quality of life and health behaviors, and even lead to the death of the widow or widower (Elwert and Christakis 2008; Williams 2004). For this reason, the loss of the spouse may be particularly important for changes to older adults' social lives, because of the seriousness of this loss for their overall wellbeing.

Furthermore, mobilization of a social network may be specific to the domain that the deceased confidant inhabited. That is, following the loss of a friend, other friends may mobilize around each other in order to provide support to those who may have been part of their shared network. Similarly, with the loss of a family member, family members may be likely to come to

each other's aid in order to compensate for the loss of that family member. Although this hypothesis is speculation, there is theoretical reason to suppose that this may be the case, since family members are ascribed by the ties of marriage and blood, whereas friend ties are often achieved, and formed through participation in activities of common interest that may not overlap with family (Bellotti 2008; Feld 1981; Fischer 1982; Small 2010). Therefore there is some reason to suppose that friendship and family are not only culturally distinguishable, but structurally as well, constituting overlapping but separable domains in individuals' social networks. However, if, as socio-emotional selectivity theory claims, friends are typically less strong and reliable connections than family members, friends may be less likely to mobilize at all. Friends may also have less dense social networks than family, meaning fewer friends may know each other, when compared to family, and therefore be less likely to react supportively upon the death of a particular friend (Bellotti 2008). These competing accounts may be arbitrated by empirical investigation.

Gender and the death of a confidant

One additional nuance to the above account must also be the gender of the person who has experienced the death of a confidant. This is particularly important for widowhood, since women often provide more and higher-quality support to their husbands, than husbands do for their wives (Neff and Karney 2005). For this reason, the harmful consequences of the death of one's wife, within heterosexual relationships, are often worse than the consequences for the loss of one's husband (Elwert and Christakis 2008; Helsing, Szklo, and Comstock 1981; Stroebe and Stroebe 1983). Women are also more likely than men in mixed-gender partnerships to manage the social relationships of both persons in the marriage, engaging in what some have called 'kinkeeping' – activities that maintain the strength and reliability of ties to all family members

(Gallagher and Gerstel 1993; Gerstel and Gallagher 1993). Therefore for a husband who loses his wife, he may receive less aid from his social networks, compared to a wife who loses her husband, and has more direct access to the networks that could support her.

This gendered account extends beyond the realm of the marriage. Previous studies have shown that men tend to have fewer and less-close social connections than women (Cornwell, Laumann, and Schumm 2008), and may therefore not be as likely to access increased social support following the death of a confidant. Men may even be less likely to be open about their need for support, meaning confidants might assume that their needs are already being met, or feel as if they are imposing on someone who has not signaled a need for greater connectedness. This could even extend to the religious domain, since men tend to report lower levels of religiosity (Krause 2008; Miller and Hoffman 1995; Norton, Skoog, Franklin, Corcoran, Tschanz, P. P. Zandi, J.C. Breitner, Welsh-Bohmer, Steffens, and Investigators 2006); men might also therefore be less likely to seek out support from religious organizations following the death of a key confidant.

The current study

In this section we summarize the preceding introduction as a prelude to our analysis. Based on insights from socio-emotional selectivity theory, we hypothesized that the death of a confidant will create an increase in the strength of ties to surviving confidants, that that this increase will be particularly evident with family members. Furthermore, individuals will also increase their participation in social organizations, particularly religious organizations. We hypothesize that these increases will be particularly strong for women, and weaker, if present at all, for men. Ties to friends may also become stronger after the loss of a friend, however, existing research provides ambiguous guidance for crafting this hypothesis, and therefore we

undertake this part of the analysis as an exploratory exercise, in order to determine whether the evidence supports this line of reasoning.

METHODS

Data

Data for this study come from two waves of the National Social Life Health and Aging Project (NSHAP), a nationally-representative survey of community-dwelling older adults (Waite et al. 2013). The first wave of NSHAP was fielded in 2005/2006, and surveyed 3005 individuals. The second wave was fielded in 2010/2011, and carried out follow-up with 2261 of the original 3005 individuals (of the 744 people who did not return, 431 were deceased, and the rest refused or were too sick to participate). NSHAP is an ideal dataset for investigating the questions listed above, because it was designed to provide the most comprehensive picture to date on older adults' social lives, and how they change over time. To this end, NSHAP includes a version of the General Social Survey (GSS) 'important matters' social network roster, placed at the head of the survey to ameliorate response burden and interviewer burden, which may have led to serious distortions in versions of the roster used in the GSS. Comparisons with other surveys have revealed that NSHAP was likely successful in this effort, with minimal distortion arising from interviewer effects (Cornwell, Schumm, Laumann, and Graber 2009; Paik and Sanchagrin 2013).

Measures

Key independent variables – confidant death. Note that NSHAP had a variant on the GSS network roster, which is typically capped at five confidants. The NSHAP version forced respondents to list their spouse if they did not nominate them, and then whether there was anyone 'special' that the respondent had forgotten; this leads to a maximum network size of seven. We also determine the relationship that the respondent shared with this deceased

confidant. From the NSHAP social network roster, we derive measures of whether any of the respondent's confidants from wave one died between 2005/2006 and 2010/2011. We also include a measure of non-confidant death derived from NSHAP's leave-behind questionnaire. Respondents were asked whether "*In the past five years, has anyone close to you died, such as a spouse, a close family member, or a close friend?*" If participants answered 'yes' to this, but none of their wave one network roster confidants died, they were coded as having experienced a non-confidant death.

Key dependent measures – older adults' social lives. From the roster we produce measures of how close respondents are, on average, to their confidants, and how much time they spend with them on average (operationalized as number of days/year). This variable was recoded from an ordinal measure following previous NSHAP analyses (Cornwell, Laumann, and Schumm 2008). These are split by friends and family. We also produce measures of social support from friends and family, using measures how often people feel they can open up to and rely upon their friends and family; each of these measures ranged from 1 to 3 (alpha for friend items at wave two = 0.72; for family at wave two = 0.60; family at wave one = 0.63; friends at wave one = 0.64). Respondents also reported on how often they volunteer, and how often they attend religious services, using 7-point items that ranged from '*never*' to '*several times a week.*' These same measures were used at wave one to create lagged dependent variables.

Controls. We also control for age at baseline (wave one), race, education, retirement status, whether the respondent was married, total household assets (logged), and respondents' family network size, friend network size, and number of all other network contacts. We also control for cognitive ability, using the Short Portable Mental Status Questionnaire, which is composed of ten items, and scored as the number of items respondents got 'correct' (Pfeiffer

1975). Finally, we control for functional health as a count of seven possible functional health problems, where higher scores indicate greater problems (Activities of Daily Living, or ADLs; e.g. has difficulty walking a block, toileting, eating; Katz, Down, Cash, and Grotz 1970). The controls also include the predicted probability that a respondent would return from wave one to wave two of NSHAP. The creation and purpose of this last measure is described below.

Analytic approach

Analyses proceed using lagged dependent variable models, predicting tie strength, social support, and frequency of social participation at wave two, using confidant death variables (i.e. events that happened between waves), wave one controls, and wave one lagged dependent variables in order to examine changes. In order to assuage issues arising from missing data, all analyses proceeded using multiple imputation with chained equations, with ten imputations. Dependent variables were included in the imputation process, but analyses were only carried out using cases that had observed values on the dependent variable, for each regression. We also test gender interactions, following the discussion above which proposed that the social consequences of confidant death might vary by gender. All regressions included a control for predicted probability of retention. This variable was produced via a logit regression, predicting retention using education, gender, age, race, marital status, physical health, comorbidity burden (measure described here: Vasilopoulos, Kotwal, Huisingh-Scheetz, and Waite 2014), wave one network size, smoking, and retirement status. The purpose of this measure was to control for underlying probability that the respondent themselves might not survive between waves; as our research question is not about the mortality penalty arising from confidant death, but rather the consequences of confidant mortality for still-living persons, this control aims to assuage survivor bias.

RESULTS

Table one shows descriptive statistics for returning respondents in NSHAP. We can see that the most common form of death was the death of a family member, but there were many people who lost someone in their social lives that was not a member of their confidant network (i.e. was not mentioned in the roster). The returning sample was in overall good health, including good cognitive health, was slightly more female than male, and was predominantly white, in keeping with the overall demographics of this age group and cohort.

Table two shows the first set of regressions predicting continuous outcomes: social support, time spent with confidants, closeness to confidants. Here we can see that following the death of a spouse, respondents showed an increase in support from both friends and family, but only showed an increase in time spent with family. There was no significant association between death of a spouse and changes in closeness to family or friends. The death of an 'other' confidant was also associated with increased time spent with family. Table three shows the same predictors being used with an ordinal logit link to predict changes in attendance at services, and volunteering. Here as well, only the death of a spouse was associated with changes in older adults' social lives, and only as regards attendance at services; those whose spouses died between waves were more likely to begin attending religious services more often.

We also investigated gender interactions, as described above. There were limited gender interactions, and in fact, only one emerged. When predicting time spent with family, women showed a decrease in time spent with family following the death of a family member, whereas men showed no difference (b_{fam_death} = 16.71, n.s.; b_{female}=29.93 p<.01 ; $b_{interaction}$=-29.88, p<.05). There were no other significant interactions.

DISCUSSION

Many of the above results were in line with what would be predicted under socio-emotional selectivity theory. The loss of a spouse – perhaps one of the most important network contacts in older adulthood – precipitated an increase in social support from friends and family, and also an increase in the amount of time that people spent with the family, but not their friends. Individuals were also more likely to attend religious services after the death of their spouse, but not to volunteer more, in line with theoretical perspectives that describe religiosity as a source of subjective meaning surrounding mortality. The fact that both friends and family seemed to mobilize after the death of a spouse is revealing, and suggests that the loss of a spouse may be so broadly-recognized as traumatic that people mobilize to support the bereaved from across social domains. However, if so, this is not reflected in terms of time spent with the person who lost their spouse, and could reflect that however much individuals feel they *can* depend upon friends and family after the death of a spouse, family might still be providing the bulk of increased support, through more frequent contact with the bereaved.

Spouses were virtually unique in terms of their effect upon older adults' social lives, following their death. Friends, family, and other confidants and non-confidants showed no significant associations at all with changes in social life, with the exception of non-family, non-spouse, non-friend confidants and time spent with family. This pattern emerged despite the fact that spousal loss was among the rarest forms of confidant death in the network, and therefore, there should be even greater power to detect associations with other forms of confidant death. This speaks to what could be the stability of older adults' social network structures. This may also speak to the unique and often more all-encompassing satisfaction of needs offered by a spouse, whereas other relationship types are diverse in the types of needs they may satisfy (e.g., one friend is primarily a traveling companion, another is a source of emotional comfort, etc.),

and furthermore, may satisfy situationally and according to whoever is closest at hand (Small and Sukhu 2016).The death of any particular person seems to neither compromise network ties, nor cause them to increase in strength in order to compensate for the loss. This also accords with recent findings that even when the particular people that make up a network change, network properties can still remain stable over time, replaced by others in similar positions (Cornwell, Schumm, Laumann, Kim, and Kim 2014; Cornwell and Laumann 2013), suggesting that social forces (e.g. those surrounding age, class, gender, and race/ethnicity) and psychological forces (e.g. pro-social personality) may remain roughly the same over the observation period, leading the network to return to a baseline state, though not necessarily with the same people. This will be investigated in future work for this project, using recent advances in network stability models, which allow us to consider how particular people move into, or remain in the network, in response to the death of a confidant (Schneider, Cornwell, Jonas, Lancki, Behler, Skaathun, Young, Morgan, Michaels, Duvoisin, Khanna, Friedman, Schumm, Laumann, and the uConnect Study Team 2017). Another possibility is that the changes to older adults' social lives are too fleeting to be captured by the coarseness of the intervals in NSHAP (Guiaux, Van Tilburg, and Van Groenou 2007), and unfortunately, we do not have information on when the person passed away, to compare people who recently lost a confidant to those who lost a confidant closer to wave one.

The generalizability of these findings, at least to community-dwelling older Americans, is likely to be very great given the high quality of the NSHAP sample. One may therefore take the associations documented here as providing a good empirical grounding for developing theory. Specifically as regards socio-emotional selectivity theory, it demonstrates that the loss of certain confidants may shorten time horizons further, and lead individuals to more closely connect to

key persons (Carstensen 1992a). However, the loss of a confidant does not seem to trigger increased closeness, or different role-specific mobilizations of social support. The changes are mostly in terms of how much *time* a person spends doing certain things (i.e. going to church) and with whom (i.e. family).

There are also implications here from the perspective of social services. Although older adults' social lives may seem resilient to confidant death, that may also be a bad thing – it suggests that there are also limited positive changes that arise to compensate for the death of a confidant. There were also no differences between men and women for many of the associations, and there were so many interactions tested that the one interaction that was discovered may very well be the result of type 1 error, especially since it was in an unexpected direction. So although there appears to be no greater vulnerability for men, there is also no comparative advantage for women. Men and women may therefore need to be equally served by support services that help to assuage grief and lessen the psychological and instrumental burdens that arise from the loss of a confidant.

Although this study was able to utilize the highly-detailed information from NSHAP to arrive at these findings, this project was unable to overcome several limitations. The time scale issue, mentioned above, greatly simplifies the complex social processes surrounding the death of a confidant, and there are many questions that NSHAP simply cannot answer or even begin to address. For example, what happens when multiple confidants die close together in time, versus far apart? Do some mobilizations of support increase and stay elevated, and do others peak early, and then drop away? If the death of a confidant occurs close to a health crisis, are its effects on older adults' social lives that much greater?

Conclusions

These questions and others are hopefully answerable with data yet to be collected. However, in lieu of such data, social science should continue to build new theories that will help to inform our hypotheses. This article was not an exercise in theory-construction, but rather theory-testing. Theories of older adults social networks, and their social lives more broadly, are still few in number, and there is great room for growth in this domain. This article will also hopefully spur the collection of new data and the construction of new theory, as well as the coming-together of evidence and theory in order to advance the fields of social gerontology and the sociology of aging.

Table 1. Variables used in analysis (unweighted N= 2261; weighted N= 2068); all descriptive statistics weighted.

	Possible range	Mean (SD) / Number (%)
Death in older adults' social lives		
Spouse death	0 or 1	209 (8.73%)
Death of a family member	0 or 1	261 (10.92%)
Death of a friend	0 or 1	222 (9.29%)
Death of other confidant	0 or 1	70 (2.91%)
Death of non-confidant	0 or 1	1006 (46.40%)
Outcomes:		
Support from family	1 to 3	2.47 (0.59)
Support from friends	1 to 3	2.13 (0.67)
Time with family	0 to 365	172.40 (116.89)
Time with friends	0 to 365	134.23 (107.89)
Closeness to family	1 to 4	3.20 (0.57)
Closeness to friends	1 to 4	2.71 (0.64)
Attendance at religious services	0 to 6	3.27 (2.14)
Volunteering	0 to 6	2.19 (2.11)
Controls (all at wave one):		
Gender (female)	0 or 1	1076 (52.02%)
Age	62 to 91	72.25 (7.27)
Race/ethnicity:		
Black, non-Hispanic	0 or 1	203 (9.84%)
Hispanic	0 or 1	139 (6.75%)
Years of education	0 to	13.31 (3.72)
Retired	0 or 1	1508 (73.02%)
Married	0 or 1	1161 (56.17%)
Functional health problems (ADL deficits)	0 to 7	0.69 (1.43)
Cognitive ability (SPMSQ)	0 to 10	9.23 (0.96)
Prob. of retention	0 to 1	.80 (.12)
Num. of confidant network family	0 to 6	2.16 (1.43)
Num. of confidant network friends	0 to 6	1.11 (1.23)
Num. of other confidants	0 to 6	1.49 (1.40)
Lagged dependent variables (wave one)		
Support from family	1 to 3	2.47 (0.58)
Support from friends	1 to 3	2.18 (0.61)
Time with family	0 to 365	175.58 (116.96)
Time with friends	0 to 365	132.61 (107.18)
Closeness to family	1 to 4	3.26 (0.56)
Closeness to friends	1 to 4	2.80 (0.67)
Attendance at religious services	0 to 6	3.38 (2.09)
Volunteering	0 to 6	2.31 (2.10)

Note: Probability of retention is the predicted probability of a respondent returning from wave one to be interviewed in wave two of NSHAP.

Table 2. OLS regressions estimating associations between death of various contacts, and characteristics of older adults' social lives.

	Family support	Friend support	Time with family	Time with friends	Closeness to family	Closeness to friends
Death in older adults' social lives						
Spouse death	0.16**	0.22**	26.59*	15.27	0.08	0.05
Death of a family member	-0.07	0.05	-0.05	-2.99	0.02	0.07
Death of a friend	-0.01	-0.06	7.83	13.49	0.07	-0.01
Death of other confidant	0.01	-0.11	33.69*	17.12	0.11	0.20
Death of non-confidant	0.00	0.04	6.68	-10.91	0.07	0.06
Lagged dependent variable	0.33***	0.34***	0.52***	0.32***	0.33***	0.33***
n	2237	2227	2008	1284	2008	1284

Note: * p<.05, ** p<.01, *** p<.001; *Note:* Regressions also control for age, education, gender, race/ethnicity, retirement status at wave one, ADL problems at wave one, cognitive ability at wave one, logged assets at wave one, wave one marital status, probability of retention, and number of friends, family, and others in wave one.

Table 3. Ordinal logistic regressions estimating associations between death of various contacts, and characteristics of older adults' social lives (log odds).

	Religious services	Volunt-eering
Death in older adults' social lives		
Spouse death	0.54**	0.15
Death of a family member	0.11	0.05
Death of a friend	-0.01	0.26
Death of other confidant	0.14	-0.02
Death of non-confidant	0.14	-0.08
Lagged dependent variable	1.01***	0.66***
n	2251	1941

Note: * p<.05, ** p<.01, *** p<.001; *Note:* Regressions also control for age, education, gender, race/ethnicity, retirement status at wave one, ADL problems at wave one, cognitive ability at wave one, logged assets at wave one, wave one marital status, probability of retention, and number of friends, family, and others in wave one.

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