

*Chapter 5*

**THE DEATH OF A CLOSE RELATIVE OR FRIEND:  
IMPACT ON HEALTH AND RELATIONSHIPS**

*Stefano Cavalli\* , Luc A. Guillet and Christian J. Lalive d'Epinay*

**ABSTRACT**

The death of a significant other is seen as a major life disruption, with profound consequences for the bereaved person. This type of event occurs more and more frequently with advancing age. In this chapter, the two main questions we endeavor to answer are: in very old age, what are the main sources of bereavement, and what are the consequences of such a loss on health and on relationships?

The bereaved were split according to the category of person being grieved: a close relative or a friend, and then compared with two other groups of non-bereaved elders: one consisting of those who had declared no recent significant change in their life, and the other of those who had reported serious recent health trouble.

This chapter is an upgraded version of a previous paper (Lalive d'Epinay, Cavalli, & Spini, 2003) which was based on the observation of Swilsoo's first octogenarian cohort over a period of five years (1994-1999). Here we used all the data of the completed research, which provided a ten-year follow-up of the first cohort (1994-2004) and a five-year follow-up of the second (1999-2004). Participants on baseline were 652, with a total of 2496 interviews. In the 2003 paper, we used analyses of covariance (ANCOVA); here, we apply multilevel analyses which are especially appropriate for repeated data series.

In very old age, the great majority of the loved ones who die are either siblings or friends. The loss of either a close relative or a friend has an adverse impact on the psychological health of the bereaved, but each person displays a distinctive pattern of consequences. The death of a close relative stimulates a tightening of ties with the family that seems to buffer part of the impact on well-being. No such relational regulation comes into play upon the loss of a friend, with the result that the bereaved person suffers a sharp

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\* The authors wish to thank Dario Spini, co-author of the 2003 paper. Correspondence concerning this chapter should be addressed to Stefano Cavalli, Center for Interdisciplinary Gerontology, Rte de Drize 7, Site Battelle, CH – 1227 Carouge, stefano.cavalli@unige.ch

increase in depressive symptoms; further, the loss of a friend has a delayed disruptive effect on men's sense of closeness.

## **DEATH AND ITS IMPACT IN LATER LIFE**

The further a person advances into old age, the more he/she becomes a survivor, i.e. someone whose close relatives and friends have gradually disappeared. Having already snatched the person's ascendants, death now claims the spouse, decimates siblings and friends, and increasingly strikes at later generations. In the circle of family and friends, there are soon as many dead as living. Spousal bereavement is however more typical among the young-old than the old-old. Beyond the age of 80, women greatly outnumber men and most of them are already widows. The men, who are usually married, are still highly likely to die before their spouse. In Switzerland, according to the 2000 census (Swiss Federal Statistical Office, 2000), there are about twice as many women as men in the 80-and-over age bracket. Only 36 per cent of the women still have their spouse, compared with 64 per cent of the men. Advanced old age thus seems to be punctuated by the loss of contemporaries amongst siblings and friends, people with whom the survivor had ties derived from years of sharing rhythms of life, activities, memories and emotions. At the same time, death now seems to strike later generations more frequently than before. According to Moss, Leshner, and Moss (1986), 10% of persons had lost a child when they were over 60, and the risk accentuates with age.

### **Impact on Health**

A good deal has been written about the process of bereavement, the causes of mortality, and the advent and repercussions of widowhood. The literature is scant, however, on the reactions of older people to the death of a child, a sibling or a friend (see Fitzpatrick, 1998).

The excess mortality of the widowed, especially in the year following bereavement, is now well established (Bowling & Windsor, 1995; Carey, 1979-1980; Thierry, 1999, 2000), corroborating the "broken heart" syndrome theory (Parkes, 1972; see also Stroebe & Stroebe, 1993). Spousal bereavement often affects health also: according to Tudiver, Hilditch, Permaul, and McKendree (1992), roughly one person in four incurs problems of physical or psychological health in the first year of widowhood. Nevertheless, as far as the long-term repercussions of widowhood on health are concerned, the findings of research do not all concord. Widowhood does not seem to be associated with worsening physical health (Bennett, 1997; Lalive d'Epinay, Bickel, Maystre, & Vollenwyder, 2000). From the psychosomatic point of view, however, there is agreement that, even after the mourning period, the widowed tend to display more depressive symptoms than their married contemporaries (Delbès & Gaymu, 2000; D. Gallagher, Breckenridge, Thompson, & Peterson, 1983; Lund, Caserta, & Dimond, 1993; Umberson, Wortman, & Kessler, 1992).

The loss of a spouse is undoubtedly a major event but it is not the only instance in which a person with whom one has close affective ties and memories of shared times of life, activities and emotions is taken away. Setting aside the loss of an ascendant, which is an

unusual event in old age, let us consider the death of contemporaries (among siblings and friends) and offspring. All in all, the negative consequences of these disappearances appear to be as great as for the loss of a spouse (for the loss of a child, see Arbuckle & de Vries, 1995; Goodman, Rubinstein, Alexander, & Luborsky, 1991; Rogers & Reich, 1988) (for the loss of a brother or sister, see Brubacker, 1985; Moss et al., 1986) (for the loss of a friend, see Fitzpatrick, 1998; Roberto & Stanis, 1994). Some authors have pointed out that, in contrast to the loss of a spouse or close relative, the loss of a friend is not an occasion for any particular recognition or ritual and no specific reaction is organized by those close to the friend in question, which makes coping particularly difficult (Doka, 1989; Sklar & Hartley, 1990). One of the few empirical studies on the subject concluded that those bereft of a friend remained in better health than the control group of non-bereaved (De Vries, Lehman, & Arbuckle, 1995).

Consider for a moment the study by Hays, Gold, and Pieper (1997). Based on a longitudinal survey, the authors compare changes in the health status of four groups of individuals: bereft of a spouse, bereft of a brother or sister, bereft of a friend, and a non-bereaved control group. A comparison of the three bereaved groups shows that it is the loss of a brother or sister that has the greatest impact on the survivors' health. At the same time, the authors detect no significant difference between any of the bereaved groups and the non-bereaved group; all suffered from declining health over the period in question, the decline in functional status and self-rated health even being steeper in the control group than in the bereaved groups! According to the authors, these findings may be accounted for by the heterogeneous composition of the non-bereaved group.

### **Impact on Relationships**

Regarding the impact that the death of a loved one has on relational life, we note some measure of agreement that, with advancing age, the number of social relationships dwindle gradually (see Rook, 2000). But does this mean that relational life wanes? Spousal bereavement, for example, does not necessarily lead to social isolation; on the contrary, the surviving spouse is usually not short of company (Ferraro, Mutran, & Barresi, 1984). Some older people make up for the disappearance of their spouse by strengthening their relationships with friends and their social participation (S. K. Gallagher & Gerstel, 1993). Conversely, other studies conclude that isolation is more acute among widows and widowers (see Wenger, Davies, Shatahmasebi, & Scott, 1996) and that, despite the family's solicitude, the widowed suffer more from loneliness than those who are married (Delbès & Gaymu, 2000; Wenger et al., 1996). Childless couples are particularly exposed to isolation when one of the spouses dies (Johnson & Catalano, 1981).

From a theoretical standpoint, it is important to make a distinction between family and friends. Ties of blood and marriage engender a network in which all the members are related to one another. The death of a close relative is an event for the whole family, prompting a collective ritual and entailing relational adjustments throughout the network. The friendship network, on the other hand, is premised on elective affinities and shared interests that bind an individual to each friend, which in no way prejudices the relations that the friends may have among themselves (Allan, 1979). Based on reciprocal choice, the network of friends consists principally of contemporaries and, in the case of the elderly, of long-time friends; it therefore atrophies drastically in later life, especially as both the opportunities and the desire to make

new friends are said to dwindle (S. H. Matthews, 1986). The last-mentioned traits are however disputed (Johnson & Barer, 1997).

## Gender

A recent study has shown that the risk of bereavement is greater for older women (65 and over) than for men (Williams, Baker, Allman, & Roseman, 2006). This is a well-known fact as concerns spousal bereavement but, according to the authors, it applies also to the death of other relatives and even friends. Work done in Japan as part of a general population survey confirms this finding and extends its validity to all age brackets, from 10 to 80 (Shimai, 2004). The two studies also concord in finding that the impact of bereavement on the subject's physical and mental health is more pronounced among women than among men.

Other authors are less categorical. Most of the studies on spousal bereavement conclude that widowers encounter more health problems than widows (for exemple Lee, Willets, & Seccombe, 1998; M. A. Matthews, 1991), but there is no unanimity on this point. Lalive d'Epina y et al. (2000) observe no gender difference, while D. Gallagher et al. (1983) note that on the contrary it is women who are more affected mentally.

Various explanations exist for the higher rate of both mortality and morbidity (at least short-term) among men following the spouse's death. According to the paradigm relating to disruptive events and the way they are regulated, the more predictable an event is, the more it can be anticipated and the better it can be tolerated (Lowenthal, Thurner, & Chiriboga, 1975); from this standpoint, spousal bereavement is a possibility that women can accept more easily than men (Lee et al., 1998). Another theory (Aldwin, 1990) focuses on the consequences of a death for the survivor's social network. It is common knowledge that the wife, rather than the husband, is the keeper of the network ; her relational life is richer so she has more people round her when she is deprived of her spouse (Coenen-Huther, Kellerhals, & Von Allmen, 1994; M. A. Matthews, 1991). Moreover, the status of widow, unlike that of widower, is a well-established one recalling the existence of widows' groups always ready to welcome and support 'newcomers'; spousal bereavement thus implies a greater risk of isolation for men. A third approach centers on the reordering of daily life; up to the present at any rate, cohort studies have shown that it is the bereft woman who is better equipped than the man to deal with the tasks of everyday living. These three perspectives (normality and anticipation of the event, network and role, reordering of daily life) together lend weight to the hypothesis that the stress associated with spousal loss is more keenly felt by men (Pearlin, Menaghan, Lieberman, & Mullan, 1981).

Offsetting this, men have the advantage in one respect at least, namely, in their chances of remarrying (Thierry, 1999) or more generally of finding a new soulmate. A qualitative survey carried out successively with a number of widows and widowers aged around 70 showed that nearly all the widowers had found a companion or a friend, without necessarily contemplating marriage or even living together (Groupe "SOL" de l'Université du 3e âge de Genève, 1996).

At this juncture, four comments are called for. First of all, with some quoted exceptions, the empirical studies on the loss of a close relative (other than a spouse) or friend are of a qualitative nature and are based on small samples. Secondly, they deal with the elderly without distinction. According to one hypothesis of the life course theory, however, the

likelihood of a given event occurring, and the repercussions of the event, differ depending on the time of life when the event occurs (Elder, 1998). Johnson and Barer (1997) point out, for example, that one characteristic of the very old is their ability to cope with tragic events. Thirdly, most of the studies examine the impact of bereavement a few months or a year after the event. Psychosomatic and relational effects may however come to light much later in the adjustment process. As Fitzpatrick (1998) suggests for morbidity, the analytical plan should be designed to cover both the short and the medium term. Lastly, while the death of a loved one is recognized as being a major disruptive event with repercussions on health and relational life, there is no consensus on the specifics.

### **Working Hypotheses**

Based on a review of the literature, we propose the following hypotheses.

#### ***Differential Incidence of Losses of a Loved One***

Hypothesis 1: In advanced old age, the source of most bereavements is a sibling or a friend, rather than the spouse or a child.

#### ***Impact on Health***

Three dimensions of health are distinguished: physical pains, functional health, and psychological health (see next section).

Hypothesis 2: The loss of a close relative or friend adversely affects the health of the surviving elder.

Hypothesis 3: The greatest adverse impact of the loss of a loved one is on the psychological dimension of health.

#### ***Impact of Relationships***

Two dimensions are distinguished: interactive and affective (see next section).

Hypothesis 4 (family relationships): Considering the systemic nature of the family network and the presence of a bereavement ritual, the loss of a close relative adversely affects the affective dimension, not the interactive dimension.

Hypothesis 5 (relations with friends): Considering the ego-centered organization of the friends network and the lack of a bereavement ritual, the loss of a close friend can be expected to affect adversely both the interactive and the affective dimension.

#### ***Gender***

We chose here to test the accuracy of the thesis put forward by Williams et al. (2006) on “feminization of bereavement” for older women.

Hypothesis 6: Older women are more liable than men to suffer losses among their loved ones.

Hypothesis 7: The death of a loved one has greater adverse consequences on older women than on men.

With the exception of the first proposition, for which there is ample evidence, these are exploratory hypotheses which will serve as a guide to the analysis of data and interpretation of results.

Finally, previous studies suggest that the time span also has to be taken into account. The effects will therefore be assessed distinguishing the short and longer terms.

## METHODS<sup>1</sup>

### Respondents

Analyses are based on the data gathered from the 652 community-dwelling elders of both cohorts who were part of Swilsoo at baseline, and with whom 2,496 interviews were carried out.

### Measures

#### *Records of Deaths*

*Spouse, sibling, child.* The completed questionnaire provided an exact record of the civil status of the participant and of the number of siblings and children at each wave. At baseline, 69% had at least one sibling, 79% had at least one child. Forty-nine percent of participants were living with their spouse, but here the gender gap was huge: 71% of the men had their spouse at home, but only 27% of the women. From the second wave onwards, the recording of deaths was checked against the information gathered at baseline.

*Friend.* At baseline, 74% declared that they had a close friend in their network. The recording of deaths of friends started at the second wave of interviews with each cohort, by way of an open question asking whether changes had occurred in the individual's circle of friends since the previous round.

#### *Health*

*Physical pains.* This question listed a number of possible sources of physical suffering (see Lalive d'Epinay et al., 1983 pp. 134-137). Eleven items were proposed: lower limbs, upper limbs, head/face, back, heart, respiratory organs, stomach/abdomen, genital/urinary organs, chest, fever, other. For each item, the respondent reported the degree of his or her suffering on a 3-point scale: no suffering at all, some suffering, suffering a lot. This measure was similar to that used by Kane, Bell, Riegler, Wilson, and Kane (1993) for measuring physical pains, with the difference that they evaluated the frequency of pain. Only the last answer was taken into account across the 11 possible sources of suffering so we in fact used a scale ranging from 0 (no acute suffering) to 11 (11 parts of the body with acute pain). Sample mean at W1 ( $SD$ ) = 0.76 (1.11).

*Functional health.* The person's ability to perform unaided the essential acts of everyday living (Katz, Downs, Cash, & Grotz, 1970; Lawton & Brody, 1969) was assessed. Included

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<sup>1</sup> For a detailed presentation of the Swilsoo research program, see chapter 1.

were five basic activities – washing, dressing and undressing, eating, rising from and going to bed, and moving from one room to another – and three actions involving mobility – moving around outside, walking at least 200 meters, and going up and down stairs. The overall score, ranging from 0 to 16, was the sum of the responses calculated as follows: incapacity (2), some difficulty (1), no difficulty (0). Sample mean at W1 ( $SD$ ) = 1.16 (2.51).

*Depressive symptoms (psychological health).* Depressive symptoms were recorded by means of the Self-Assessing Depression Scale (SADS, see Wang, Treul, & Alverno, 1975), as adapted by Lalive d'Epina et al. (1983 pp.127-129). Replies of « never » (0), « rarely » (1), « often » (2) or « always » (3) were recorded for 13 items: feels tired, has trouble sleeping, feels sad, feels lonely, has crying spells or feels like it, feels worried, feels irritable, feels anxious, lacks confidence in the future, lacks appetite, finds time passes slowly, lacks self-confidence, has no pleasure in doing things. This scale ranged from 0 (no symptoms) to 39. Sample mean at W1 ( $SD$ ) = 7.85 (5.58).

### *Relations with Family and Friends*

Two dimensions were distinguished.

*The interactive dimension.* Based on a record of the frequency (almost never (0), at least once a year (1), once a month (2), once a week (3), almost daily (4)) of visits received, visits made and telephone conversations; range from 0 (no contacts) to 12; sample mean at W1 ( $SD$ ) = 7.05 (2.62) for family relations and 4.93 (2.92) for social relations.

*The affective dimension.* The indicator used here was the feeling of closeness. The subject was asked how many (a) family members (apart from the spouse), and (b) friends and relatives, he or she has to whom he or she felt "personally very close (loves greatly, feels very concerned about that person's welfare)"; with 3 possible answers 'any', 'one' or 'two or more' for family members and with 4 possible answers 'any', 'one', 'two' or 'three or more' for close friends. (Sample mean at W1 ( $SD$ ) = 1.62 (0.62) for family and 1.68 (1.22) for friends). The absence of anyone who is especially dear is a definition of affective isolation.

## **Description of Analysis**

Two methodological difficulties had to be solved. One concerned the time span over which the impact of bereavement was to be measured and the other related to the definition of the control group or groups.

### *Time Span*

Two temporal measures of the impact of bereavement were introduced: short-term, referring to the interval between two successive waves, and medium-term, referring to the interval between one wave and the next but one. More technically, for the short term, the change on the dependent variable supposedly related to a death occurring between two successive waves (i.e. occurring after  $W_{n-1}$  and registered at  $W_n$ ) was measured at  $W_n$  taking into account the value of the dependent variable established at  $W_{n-1}$ . For the medium term, the death was recorded in the same way (at  $W_n$ ) but the change on the dependent variable was

measured during the following wave, at  $W_{n+1}$  (with reference to the value of the dependent variable at  $W_{n-1}$ ).

### ***Control Groups: Categorization of the Non-bereaved Elders***

If we assume that there is a negative effect on health, for example, a decline among bereaved subjects has to be observed but it is also necessary to demonstrate that the decline is attributable to the bereavement and not to some other event. This was the stumbling-block encountered by Hays et al. (1997) in the above-mentioned study; in comparing the bereaved with the non-bereaved, the authors observed a similar change in health in the two groups. But they did not feel entitled to conclude from this result that the death of a close relative had no specific impact of the survivor's because, they said, of the heterogeneous composition of the control group. Indeed, the latter surely comprised elders who had experienced other kind of losses, most often directly related to their health.

Although Hays et al. did not offer any solution, it can be sought by subdividing the non-bereaved into subgroups and keeping only well homogenized categories. To that end, we took advantage of a question aimed at studying the elders' perception of significant changes in their own life. As from the second wave of our survey, the interview started with the question, "Since our last visit, have there been any important changes in your life?" Affirmative answers were classified according to the life domain on which the change impinged and the valence (positive, negative, and neutral). The classification, with its results, is given in the preceding chapter (see chapter 4).

Table 1 displays the classification based on the self-reported changes (or no changes) among the non-bereaved sequences; 63.8% are the sequences where the elder reported that no important change had occurred in his or her life since the previous interview; 19% reported serious health trouble, and 4.1% a positive change (health improvement, family weddings, birth of an offspring, etc.); the remaining 13.1% were classified as "neutrals" (a change was reported but its valence was unclear) or "others" (the elder reported two or more changes of a different nature or contradictory in valence or in a few cases negative changes not related to health).

**Table 1. Bereaved and non-bereaved sequences. Distribution of non-bereaved according to self-reported changes**

	n	% on total non-bereaved	% on total sequences
Non-bereaved			
Health trouble changes	284	19.0	15.4
Positive changes	62	4.1	3.3
Neutrals & others	195	13.1	10.6
No change	953	63.8	51.7
Total non-bereaved	1494	100.0	81.0
Total bereaved	350	-	19.0
Total sequences	1844	-	100.0

At that stage, we decided to disregard the categories “other” for its lack of homogeneity, and “positive change” for its relatively small number of sequences ( $n = 62$ ). We kept the “no change” and the “health trouble change” categories. Comparing the bereaved with the “no change” group provides a measure of the effect attributable to bereavement, while a comparison with the “health trouble” group highlights the differential impact of both kinds of events.

## Analyses

Multilevel analyses were applied in comparing the bereaved groups with the “no change” and “health trouble change” groups on the five dependent variables (physical pains, functional health, well-being, interactive dimension and feeling of closeness). Multilevel models were developed for the purpose of analyzing data with multilevel sets (e.g. repeated measures for one individual). They allow the use of repeated measures where both the number of interviews per participant and the time intervals between interviews vary. Furthermore, multilevel analyses can tolerate an incomplete data set because they use all available data instead of restricting the analysis to individuals who participated in all nine waves, thus limiting the selectivity effects (Bryk & Raudenbush, 1992).

A model was tested for each of the five dependent variables. Age (centered on its grand mean), the three categories of change (see below) and the measure of the dependent variables at the previous wave ( $W_{n-1}$ ) were included as level-1, time-varying predictors; gender as a level-2, time-invariant predictor. Also examined were the possible interaction effects between gender and the three categories. Results were reported with a robust estimation of the standard errors and the effects were tested by the method of restricted maximum likelihood using HLM version 6.0 (Raudenbush, Bryk, Cheong, & Congdon, 2004).

## RESULTS

### Death Ever-present

Two hundred and thirty-six deaths of close relatives (spouse, siblings and children) and 224 of friends were registered (cf. table 2)<sup>2</sup>. On average, a death was mentioned in one interview out of four. At the end of the first five-year period, more than half of the survivors had lost a close relative, a dear friend, or both. At the end of the ten-year follow-up, seven out of ten survivors (first cohort) had experienced one or more bereavements. Close to half of the losses referred to friends, and four out of ten to siblings, which is by far the most frequent type of loss within the family<sup>3</sup>.

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<sup>2</sup> The difference between the total of 460 bereavements in table 2 and the 350 sequences with recorded bereavements in table 1 is due to the sequences with more than one recorded death.

<sup>3</sup> In the following pages, in three cases out of four the loss of a close relative means the loss of a sibling.

**Table 2. Distribution of the deceased by category of decedent**

	n	%
Spouse	34	7.4
Child	19	4.1
Sibling	183	39.8
Friend	224	48.7
Total	460	100.0

Table 2 presents the figures for these deaths of relatives and friends, and table 3 a classification according to the gender of the bereaved elders. Although the mean duration of participation in the study was about half a year longer among women, the same proportion of each gender suffered losses, with a higher mean number of deaths reported by men. This last difference results from the fact that men reported more losses of friends than women. Note also that when we take into account only those who have a spouse or siblings, elder women are still more at risk of losing their husband or a sibling.

### Bereavement and Health

A comparison with the “no change” group shows that bereavement had a marked short-term impact on well-being (depressive symptoms) and also a distinct impact on functional health (Table 4). The latter impact disappeared with time, while the former waned but remained significant. With regard to the “health trouble” group, it appeared that both kinds of disruptive events had a similar impact on well-being. Of note is the fact that the subjective report of health trouble was corroborated by the measures of physical pains in both the short and the medium term, and on functional health in the short term.

**Table 3. Bereaved elders by gender and category of decedent**

Death \ Gender	Men				Women				Total			
	n	M	% <sup>1</sup>	% <sup>2</sup>	n	M	% <sup>1</sup>	% <sup>2</sup>	n	M	% <sup>1</sup>	% <sup>2</sup>
Spouse	18	1.0	5.5	7.7	16	1.0	5.0	18.4	34	1.0	5.2	10.6
Child	12	1.1	3.7	4.5	6	1.0	1.9	2.4	18	1.0	2.8	3.5
Sibling	51	1.5	15.5	22.7	73	1.5	22.6	32.6	124	1.5	19.0	27.6
Friend	59	2.5	17.9	-	42	1.9	13.0	-	101	2.2	15.5	-
Total bereaved elders	111	2.3	33.7	-	112	1.9	34.7	-	223	2.2	34.2	-
Participants at baseline	329				323				652			
Mean duration of participation (years)	5.5				5.9				5.7			

<sup>1</sup>% of total participants.

<sup>2</sup>% of total of those who had such a relative (or close friend) at baseline.

## Bereavement and Relations with Family and Friends

Turning to the repercussions that the loss of someone close may have on the relationships of the elderly, we took two aspects into consideration: the interactive dimension (contacts) and the affective dimension (the feeling of closeness). From the outset, we subdivided the bereaved according to the category of decedent involved and, logically, we analyzed the impact of the loss of a close relative on *family life* (Table 5) and that of a friend on *social, extra familial life* (Table 6). In tables 5 and 6, the three measures of health are included, in order to check whether the two categories of bereavement have the same kind of impact or not.

When compared with the “no change” group, *losses in the family* had two kinds of effect: in the short term, there was a strengthening of contacts with the family but on the other hand there was a negative impact on well-being and on functional health (Table 5). The intensification of family interaction was also evident when the bereaved persons were compared with the “health trouble” group. But neither of these effects lasted in the medium term.

Unlike the loss of a close relative, *the death of a friend* was not followed by a surge in social exchanges (Table 6). In the short term the grief was associated with a sharp increase in depressive symptoms, while in the medium term there was a weakening of the sense of closeness. Here a gender effect was registered, the last-mentioned trend being specific to men!

**Table 4. Death of a loved one: relation to health (physical pains, functional impairments and depressive symptoms). Bereaved group compared with "health trouble" and "no change" groups (multilevel analysis)**

Bereaved n of sequences	versus No change 953		versus Health trouble change 284	
	Coeff.	P.value	Coeff.	P.value
Short term				
Physical pains	0.08	0.293	-0.26	0.009**
Functional impairments	0.29	0.044*	-0.92	<0.001***
Depressive symptoms	1.15	<0.001***	0.14	0.672
Medium term				
Physical pains	-0.01	0.967	-0.34	0.005**
Functional impairments	0.02	0.918	-0.58	0.061
Depressive symptoms	0.76	0.021*	-0.02	0.962

Note: Age and sex are controlled. Bereaved: n = 350. \*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ . Physical pains: scale ranging from 0 (no acute suffering) to 11 (11 parts of the body with acute pain). Functional health: scale ranging from 0 (no disability or difficulty) to 16 (8 disabilities). Depressive symptoms: scale ranging from 0 (no depressive symptoms) to 39.

**Table 5. Death of a close relative: relation to health and family life. Family bereaved compared to "health trouble" and "no change" groups (multilevel analysis)**

Family bereaved n of sequences	versus No change 953		versus Health trouble change 284	
	Coeff.	P.value	Coeff.	P.value
<b>Short term</b>				
<b>Health</b>				
Physical pains	0.07	0.519	-0.30	0.017*
Functional impairments	0.33	0.047*	-0.97	0.001***
Depressive symptoms	0.83	0.016*	-0.24	0.552
<b>Family life</b>				
Interactive dimension	0.37	0.026*	0.47	0.033*
Feeling of closeness	0.05	0.103	0.06	0.067
<b>Medium term</b>				
<b>Health</b>				
Physical pains	0.08	0.531	-0.39	0.006**
Functional impairments	0.15	0.490	-0.80	0.018*
Depressive symptoms	0.70	0.054	-0.30	0.525
<b>Family life</b>				
Interactive dimension	0.19	0.259	0.31	0.217
Feeling of closeness	0.02	0.580	0.06	0.218

Note: Age and sex are controlled. Bereaved: n = 350. \*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ . Physical pains: scale ranging from 0 (no acute suffering) to 11 (11 parts of the body with acute pain). Functional impairments: scale ranging from 0 (no disability or difficulty) to 16 (8 disabilities). Depressive symptoms: scale ranging from 0 (no depressive symptoms) to 39. Interactive dimension: scale ranging from 0 (no contact) to 12. Feeling of closeness: scale ranging from 0 (no very close person) to 2 or more.

## The Hypotheses Revisited

*Sources of bereavement* (Hyp. 1): Our results confirmed that in very old age, the two main sources of bereavement are siblings and friends. The fact that as many as three out of four deaths among close relatives (children, spouses, siblings) are siblings may be a surprise.

*Health* (Hyp. 2-3): We postulated that there is an overall effect on health, but that the psychological impact is greater than the impact on physical or functional dimensions. The only attested relationship with the latter is between the loss of a close relative and functional health (Hyp. 2). Psychologically, bereavement is clearly associated with an increase in depressive symptoms. This impact on well-being is more acute in the case of the loss of a friend than in that of loss of a close relative, but it is manifest in both cases (Hyp. 3).

**Table 6. Death of a friend: relation to health and social life. Loss of friend compared to "health trouble" and "no change" groups (multilevel analysis)**

Loss of friend n of sequences	versus No change 953		versus Health trouble change 284	
	Coeff.	P.value	Coeff.	P.value
<b>Short term</b>				
<b>Health</b>				
Physical pains	0.13	0.266	-0.24	0.065
Functional impairments	0.18	0.209	-1.10	<0.001***
Depressive symptoms	1.25	<0.001***	0.04	0.916
<b>Social life</b>				
Interactive dimension	-0.24	0.285	-0.02	0.930
Feeling of closeness	-0.01	0.988	0.03	0.663
<b>Medium term</b>				
<b>Health</b>				
Physical pains	0.13	0.285	-0.30	0.030*
Functional impairments	-0.30	0.068	-1.09	<0.001***
Depressive symptoms	0.61	0.185	-0.26	0.652
<b>Social life</b>				
Interactive dimension	0.41	0.090	0.26	0.411
Feeling of closeness	-0.32	0.015* <sup>1</sup>	-0.19	0.189

Note: Age and sex are controlled. Bereaved: n = 350. \* p ≤ .05. \*\* p ≤ .01. \*\*\* p ≤ .001. Physical pains: scale ranging from 0 (no acute suffering) to 11 (11 parts of the body with acute pain). Functional impairments: scale ranging from 0 (no disability or difficulty) to 16 (8 disabilities). Depressive symptoms: scale ranging from 0 (no depressive symptoms) to 39. Interactive dimension: scale ranging from 0 (no contact) to 12. Feeling of closeness: scale ranging from 0 (no very close person) to 3 or more.

<sup>1</sup> Interaction with gender: coeff. = -0.34 (p-value = 0.043\*). When a bereavement occurred, the feeling of closeness of women, contrary to men, did not decrease.

*Family and extrafamilial life* (Hyp. 4-5): The idea of contrasting the systemic nature of the family network with the ego-centered nature of the friends' network was valid, but it has to be amended in the light of the results: the family reacts to the death of one of its members by intensifying exchanges in the short term, offering support to the mourning elder. With the passage of time, however, the tempo of exchanges returns to normal (Hyp. 4). As expected, no similar reaction from the friends' network was observed. But we hypothesized that the loss would adversely affect both the interactive and the affective dimension. The former was confirmed but not the latter: in the medium term the feeling of having a close friend (sense of closeness) was fading (but only among the men; see below) (Hyp. 5).

*Gender* (Hyp. 6-7): It was confirmed that in very old age losing a spouse is no longer a frequent event, but also that the few remaining married women were still more likely than married men to become widowed. As for the risk of losing a loved one, it seemed to impinge equally on both women and men, although differences were observed according to the

category of decedent, with women more often bereft of siblings, and men more often of friends (Hyp.6).

Gender was introduced as control variable in every multilevel analysis. The only significant interaction related to the medium-term impact of the loss of a friend on the affective dimension: this was specific to men. With this exception, all the negative consequences of bereavement were equally shared by both genders (Hyp.7). Our data do not substantiate the “feminization of bereavement” thesis.

## DISCUSSION AND CONCLUSION

Bearing in mind the reservations of Hay et al. (1997) concerning the inadequacy of their non-bereaved group as control because of its heterogeneity (deriving from the various sources of possible events that impinged on the elders' life), we decided to split the non-bereaved into homogeneous groups, separating those reporting no important change in their life recently from those who declared a recent serious health problem.

Thanks to this analytical design, the distinctive implications of two kinds of bereavement (bereft of a close relative, of a friend) on health and social life could be traced, and also compared with those due to health trouble. Firstly, while the elders reporting health trouble suffer a decline in their physical and functional health and also an increase in depressive symptoms, bereavement mainly strikes at psychological health. Secondly, the pattern of impact varies depending on the tie between the elder and the deceased. The death of a close relative impacts the functional dimension of health, which is not the case with the loss of a friend. Thirdly, the death of a close relative stimulates exchanges within the family network in the short term, and this phenomenon seems to have a protective effect on psychological health: an increase in depressive symptoms is noted but it is distinctly less pronounced than that observed after the loss of a friend. Further, the loss of a close relative has no repercussions on the feeling of closeness within the family, and this may be due to the fact that the family network offers alternatives to the elders' affective needs. When a close friend dies, no regulation appears to be put into motion by the network. One short-term effect is a steep increase in depressive symptoms; in the medium term, the elders become aware that they have lost one of the few – maybe their only – surviving close friends. Our findings concord with the fact that, in contrast to the loss of a relative, that of a friend is not an occasion for any specific ritual or action of the part of those close; thus the bereaved remains alone with his/her grief (Doka, 1989; Sklar & Hartley, 1990). More generally, our results show that bereavement is a good tracer of the differences in structure and in functioning of each network, the systemic nature of the family network with its resilience, the ego-centred one of the friends' network with its rigidity.

In the short term, mourning a close relative or a friend has a noticeable impact on the (mainly psychological) health and on the relational life of the elders, but as time goes by, this very disruptive event seems to be regulated in the medium term and the situation returns to normal. Here, normal means: not different from the situation displayed by their “no change” contemporaries, but with two exceptions: first, elders mourning their spouse or a child seem to suffer from a lasting decline in their morale; and second, men bereft of friends have a weakening sense of closeness, the exception here being that, at that age, especially for men, it

is difficult to find a substitute for the loss of a close friend and the feeling of being a survivor intensifies.

By and large, however, after the period of mourning, the regulation is over and done with. Going against the mainstream of research on bereavement, which focuses on its disruptive effects, especially on health, Dutton and Zisooock (2005) underline people's ability to cope with it: "Accumulating evidence suggests that resilience to grief in face of bereavement is the norm, rather than an exception". This study does not relate to old age in particular, but the resilience of persons in coping with the various misfortunes that afflict old age has been noted, for example, by Johnson and Barer (1997); Pearlin (1994), and others. Our study brings fresh evidence of the considerable impact that bereavement of a loved one has on the psychological health of the elders, and of the elders' potential of resilience.

As far as gender is concerned, we could not find evidence of any "feminization of bereavement" in advanced old age. Obviously, one of the various consequences of the increasing feminization of the population with advancing old age is that women, having a longer life, will have to cope with more bereavements and will more frequently be put in the position of a survivor than men. But for those elders who share the same very old age, the Grim Reaper seems to treat the two genders in a very even-handed – and tough – way. The only differential impact related to gender is, in the medium term, the decrease in the feeling of closeness among the old men, a result that bears out not only Matthews' observation that women are the social network keepers (S. H. Matthews, 1986) but also the claim by Johnson and Barer that women are more skilled at making new friends (Johnson & Barer, 1997).

The methodological strength of our research was that we were able to disentangle the "non-bereaved" groups, which allowed us to trace the consequences of bereavement and to bring to light the distinctive patterns of consequences when the bereaved mourns a close relative or friend. Compared with our 2003 paper, which was based on the first five-year follow-up of a single cohort, the current analyses, carried out with the completed data on two cohorts (with twice as many elders and two-and-a-half times more interviews), revealed some effects not visible then (e.g. the short-term impact of the death of a relative on functional health, the medium-term degradation of the feeling of closeness when a friend is mourned), results which led to a better understanding of the two grieving processes.

The Swilsoo program centers on the life trajectories of the oldest old, who now constitute the fastest growing age group in Western countries and at the same time the group suffering from the greatest dearth of social research. The possibilities for comparison of the Swilsoo data with other studies are thus rare. Another limitation is that our study focused on the morbidity, not the mortality, ensuing from bereavement. One of our conclusions was that the oldest old have proved to be very resilient to bereavement; it would be more accurate to say that the survivors have proved to be so. Suggestions for future work are as follows:

- (a) A more complete picture could be obtained by widening the list of family decedent categories (to include at least in-laws and grandchildren); a comparative analysis of the impact of bereavement by type of kinship tie with the deceased person would be worthwhile but would require large samples;
- (b) The flexibility of the family system stems mainly from its multigenerational nature. This being so, what is the situation when the older person loses a brother or sister and has no offspring (20% of our elders belonged to a one-generation family)?

- (c) Generalizations and age-specific conclusions could be arrived at by extending the samples to other periods of the life course.

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