

## Conjoint developments in personal networks and loneliness after widowhood

De verwevenheid van veranderingen in persoonlijke relatiernetwerken  
en eenzaamheid na verweduwing

A research project conducted at the Department of Sociology & Social Gerontology of the Vrije  
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### Concise summary of the research problematic

It is known that widowhood induces changes in the personal networks of older adults and results in a high risk of loneliness. The first aim of the study is to compare the networks and loneliness before and after widowhood and to describe the changes over a period of approximately 8 years. For the network, the size as well as the composition with respect to several relationship types is studied in addition to the supportive function. A comparison will be made with developments among married older adults. The second aim is to disentangle both theoretically and empirically the conjunction of developments in networks and loneliness in old age. It is investigated to what extent network changes are the results of adaptive strategies of the widowed to reduce loneliness, and to what extent individual resources such as personality and health moderate the interaction between changes in network and loneliness. The panel data set is derived from the NESTOR-LSN and LASA research programs, including a side study on adaptation to widowhood.

### Scientific relevance

There is evidence suggesting that social embeddedness is predictive of enhanced adaptivity and prolonged life expectation (House, Landis & Umberson, 1988). Older adults with a small personal network size, who receive less emotional support from their network members and experience severe feelings of loneliness have a relatively high mortality risk (Penninx, van Tilburg, Kriegsman, Deeg, Boeke & van Eijk, 1997). Widowhood affects all of these risk factors. After widowhood network gains and losses occur (Morgan, Carder & Neal, 1997; Wenger, 1990), inducing changes in the support exchanged. Widowhood has a strong negative impact on well-being, and feelings of loneliness are very common among widows and widowers (Amato & Partidge, 1987; Atchley, 1975; Harlow, Goldberg & Comstock, 1991). However, the design of previous research on developments in personal networks and loneliness after widowhood has a number of shortcomings. (i) Some studies devoted to changes in networks after widowhood only studied specific relationship types, such as friendships (e.g. Ferraro, Mutran & Barresi, 1984). (ii) The interaction of developments in personal networks and developments in loneliness has not yet been studied. (iii) Only a few studies on the consequences of widowhood have compared the developments in personal networks and loneliness with those among married older adults (Stroebe, Stroebe, Abakoumkin & Schut, 1996). (iv) Most of the previous studies were based on cross-sectional or retrospective data, or on (short-term) developments after widowhood (e.g. Morgan, Carder & Neal, 1997). Both a pre-test and a post-test have to be inclu-

ded to assess changes induced by widowhood. Applying an improved design, the proposed research goes beyond these limitations and aims to shed new light on (the linkage of) developments in (various segments of) personal networks and loneliness after widowhood in comparison to developments among married older adults.

The project will be based on theories concerning behavioral and mental adaptation to loss, such as the social production function theory (Lindenberg, 1996; Ormel, Lindenberg, Steverink & Verbrugge, 1999) – see for an application on widowhood Nieboer, Lindenberg & Ormel, 1998) and the theory of mental incongruity (Tazelaar, 1983 – see for an application on widowhood Van Baarsen, Smit, Sniijders & Knipscheer, 1999; Dykstra & de Jong Gierveld, 1994; Stevens, 1989). Network changes are considered to be the result of adaptive strategies of the widowed aiming to reduce loneliness. A loss-based strategy includes reconsideration of the intermediary goals to obtain the pre-event level of wellbeing, for example, receiving support from specific relationship types as compensation for the loss of the partner's support. Behavioral strategies include increasing contact frequency and support given within existing relationships or the initiation of new relationships as goal-relevant means. When these strategies fail, high levels of loneliness may remain (persist) over time, eventually resulting in changed strategies and decreased interaction with network members. Furthermore, there is a sound theoretical basis for expecting loneliness to mar the quality and functioning of relationships. Coyne's (1976a, 1976b) interactional theory of depression indicates that depressed people's aversive interpersonal behaviors (e.g., excessive reassurance seeking, negativity) induce a negative emotional state in others, characterized as emotional contagion, which in turn prompts others to react with interpersonal rejection.

The scientific significance of the proposed research is to challenge the main outcomes of previous studies on social and emotional consequences of widowhood. More specifically, the confirmation or modification of conclusions derived from previous studies will increase our knowledge on determinants of wellbeing in old age. The research builds upon an earlier project entitled 'Adaptation to widowhood and the outcomes for personal relationships and wellbeing' (NWO dossier number 510-77-603; van Baarsen, 2001). It is innovative as it aims to disentangle the conjunction of (long-term) developments in networks and loneliness, among both widowed and married older adults.

### **Elaboration of the problematic**

The availability of a spouse (or non-marriage partner) is beneficial to a person's wellbeing if this person experiences support from the partner, in particular in stressful situations (de Jong Gierveld & van Tilburg, 1987). The loss of a partner is likely to result in a number of deficits in areas in which the spouse had previously been able to rely on the partner. However, the support provided within the partner relationship can be procured in all types of personal relationships (although only to a certain extent; Stroebe, Stroebe, Abakoumkin & Schut, 1996). After widowhood, one may adapt to the new situation by intensifying other relationships, such as with children (Broese van Groenou & van Tilburg, 1997) and neighbors (Ferraro & Barresi, 1982). Yet, the congruency of developments in various types of kin and non-kin relationships has not often been studied. The first research question concerns the description of changes within the personal networks and in loneliness after widowhood, and will specify network gains and losses and their potential interactions conjointly: *(1a) To what extent does widowhood induces changes in the network? Do developments differ for specific network segments, such as children, extended kin, neighbors, friends and acquaintances? (1b) Which developments occur in loneliness after widowhood?*

Only a few studies compare networks of widowed and married persons. In a recent study Wagner, Schütze and Lang (1999) concluded that networks of widows and widowers have a structure similar to that of married people. It is possible that observed changes after widowhood do not characterize the loss of the spouse specifically, but aging in general. For example, results of a cross-sectional study conducted by Lang, Staudinger and Carstensen (1998) and a longitudinal study by Van Tilburg (1998), both among general populations of aged people, showed that aging was related to a greater emphasis on close relatives within the network. This process of selection within the network may also apply to widowed older adults. Similarly, Byrne and Raphael (1997) did not observe differences in loneliness between widowed men and a matched sample of married men. *(2) Do developments in network size and composition, sup-*

*port exchanged and loneliness among widows and widowers differ from developments among married older adults?*

Personal relationships and the support received within these relationships contribute to wellbeing (Mutran & Reitzes, 1984; Silverstein & Bengtson, 1994). More specifically, although people with a small personal network are not necessarily lonely, the realization of a high-quality network reduces the risk of loneliness (de Jong Gierveld, 1998). Coping-strategies used by the lonely are directed to either adaptation of the standards, i.e. the expectations towards relationships, improving the network or coping with loneliness-induced stress (Rook & Peplau, 1982). However, it is known that loneliness is related to fears, relationship expectations, and personality characteristics, which are likely to inhibit the restoration of personal support networks after a stressful life event such as widowhood (Gfellner & Finlayson, 1988; Hansson, Jones, Carpenter & Remondet, 1986; Joiner, Katz & Lew, 1999; van Baarsen, 2001). After bereavement, fatigue, anxiety, lack of interest, and reduced cognitive functioning are common (Grimby, 1993), and adjustment to widowhood is promoted by internal control (Haas-Hawkings, Sangster, Ziegler & Reid, 1985; Lowenstein & Rosen, 1995). However, previous studies among widowed people as well as within the general population modeled the association between network characteristics and wellbeing as unidirectional, i.e., network characteristics affecting loneliness, overlooking the reversed causal direction. The next question refers to the issue of causality: *(3) Is there an interaction between developments in characteristics of (segments of) personal networks and developments in loneliness among widowed older persons?*

McCrae and Costa (1988) have suggested that absence of differences between widowed and married older adults could be attributed to the psychological resilience of most individuals and their capacity to adapt to stressful events and conditions. The results of their longitudinal study showed little or no difference on measures of psychosocial status and functioning between those married or widowed at both observations and those widowed after the first observation. Strategies of the widowed aiming to reduce loneliness by mobilizing support from network members require coping enhanced by specific personality characteristics such as mastery and self-esteem. Furthermore, the application of these strategies is restricted by factors such as health incapacity. However, a lonely person often lacks the required resources and may make less effort to improve the network. It is necessary to extend the explanatory model (question 3) with intermediate factors and factors explaining differences in networks as well as loneliness: *(4a) To what degree are developments in personal networks and loneliness explained by network-focused behavioral strategies of the widowed persons, and moderated by factors as personality and health? (4b) Does the explanatory model differ for widowed and married older adults?*

### **Methods and techniques of research**

In answering question 1, networks before and after widowhood will be compared and the developments in network characteristics among widowed older adults are described by means of multilevel regression analysis. The general tendencies as well as individual patterns are studied; the latter will be summarized by means of clustering techniques. Similarly, developments in loneliness will be studied. The developments in networks and loneliness will also be compared with those among married respondents by extending the regression equations (question 2). For question 3, a linear structural model with multiple dependent variables (network characteristics, loneliness) will be developed and tested. Time specific measurements of factors such as personality and health will be included in the model (question 4a). Multi-sample analysis will be applied to compare effects for widowed and married older adults (question 4b). If appropriate, effects will be controlled for relevant other characteristics of the older adults. For example, gender differences will be taken into account since a prevalent assumption in the literature is that when a wife dies men's social networks disintegrate because of their lack of social skills (Riggs, 1997; see also Stroebe, Stroebe, & Abakoumkin, 1999).

### **Societal relevance**

Conjugal bereavement is one of the most radical life events one can experience and it can have far-reaching consequences for wellbeing. In order to promote wellbeing and to alleviate loneliness, intervention programs have been developed to improve existing or develop new relationships. However, these programs are often devoted to specific relationships such as friendships

(e.g. Stevens & Van Tilburg, 2000). The results of the proposed project may lead to a broadening of the focus to other relationship types. Furthermore, the evaluation of these courses revealed that differences in the decline of loneliness between a group of participants and a group of non-participants were small or absent (Stevens & Van Tilburg, 2000; Van Lammeren & Geelen, 1995). Insight in the conjoint developments of networks and loneliness over a number of years in association with other personal characteristics may contribute to sharpening the goals of social intervention after widowhood or to a better selection of those participants who will profit from an intervention program.

### Data sources relevant to the project

Panel-data are collected within three connected research programs. (i) The NESTOR-program on Living arrangements and Social Networks of older adults (LSN; T1; 1992; N=4494) and its side-studies, specifically the (ii) Widowhood Adaptation Study with five observations among those widowed after T1. LSN-respondents are followed with a 3-year interval within (iii) the Longitudinal Aging Study Amsterdam (LASA; the fourth follow-up will be conducted in 2001-2002). Observations before and after widowhood are currently available for 259 older adults (age at T1 between 54 and 89 years; 66% females). On average, their networks were observed 4.5 times (of which 2.1 before widowhood) and their loneliness 6.2 times (of which 2.3 before widowhood), over a period varying between 1.3 and 7.6 years (M=6.4). In addition to the network size, information is available on network composition with respect to network member's sex and relationship type, and contact frequency and supportive exchanges within relationships (Van Tilburg, 1995). Furthermore, relationship standards are measured. The scale developed by De Jong Gierveld and Kamphuis (1985) measures loneliness; other indicators of wellbeing such as depression and anxiety are also available. Behavioral coping strategies are observed. Several measures of subjective and objective physical health (physical tests, functional limitations, chronic conditions, self-reported health, health perception, hearing, vision and speech) and five measures of cognitive functioning are available. Furthermore, several demographic (e.g. household and family composition, socioeconomic status and employment), social, psychological and personality (perceived self-efficacy, mastery, physical perceived self-efficacy, neuroticism, social inadequacy and self-esteem) characteristics are available. Characteristics of the partner (e.g. functional limitations), the partner relationship (e.g. support exchanged) and partner's death (e.g. suddenness) are observed. Similar data is available for approximately 1300 married older adults.

### Description of the research design for the entire period

Elaboration of the problem and the hypotheses	3 months
Research question 1 to 4, each	7 months
Final conclusions	4 months
PhD courses research school Psychology & Health	7 months
Holidays	6 months
Total	48 months

### Publication plan

The research questions will be answered in papers to be submitted to international journals. Provisionary titles of the papers are: (1) Networks and loneliness before and after widowhood (December 2002). (2) The interaction of developments in networks and loneliness after widowhood (December 2003). (3) Changes in networks and loneliness after widowhood: do they reflect adaptation to widowhood or consequences of aging in general? (November 2004). (4) Personality and health as factors for improving networks of lonely widows and widowers (June 2005). The PhD dissertation will be based on these publications (December 2005).

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