

**THE EFFECTS OF SOCIAL NETWORKS ON THE  
HEALTH OF OLDER AUSTRALIANS**

Lynne Catherine Giles  
B Sc (Hons), MPH

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# ABSTRACT

## *Background*

Over the past three decades, social relationships have been shown to have important effects upon health. However, many different definitions and aspects of social relationships have been considered in the various studies, making comparison of findings difficult. Furthermore, the effects of social relationships upon different health outcomes have rarely been investigated within the same cohort of older people. In addition, there is a paucity of information concerning the effects of social relationships upon health of older Australians.

## *Aim*

This thesis aims to investigate the effects of the structural aspects of social relationships – that is, social networks – on health among older Australians. The three specific health outcomes considered in this thesis were disability, residential care use and death. The specific aims of the thesis were to:

1. Develop a measurement model of social networks.
2. Examine the effects of total and specific social networks upon disability.
3. Determine the effects of total and specific social networks upon use of residential care.
4. Investigate the effects of total and specific social networks upon survival.

An additional aim was to determine if there were threshold effects of social networks on the three specific health outcomes.

## *Methods*

The study drew on six waves of data from 1477 participants in the Australian Longitudinal Study of Ageing. A range of statistical techniques, including binary and

multinomial logistic regression and survival analysis, were used in the analysis of the data. Propensity score adjustment was used to control for the effects of a broad range of covariates that encompassed sociodemographic, health, psychological and lifestyle characteristics of participants.

### *Results*

A measurement model with social networks for children, relatives, friends and confidants was validated using confirmatory factor analysis. A variable that measured total social networks was also derived. Better social networks with relatives were protective against developing mobility disability over the nine year follow-up period (odds ratio (OR) 0.77; 95% confidence interval (95%CI) 0.62 – 0.96). A similar result was found for Nagi disability (OR 0.76; 95%CI 0.62 – 0.93). Other specific social networks did not have significant effects on either measure of disability.

There were no significant effects of social networks on use of low-level residential care overall. There was a significant effect of social networks with confidants and total social networks, such that participants in the upper category of social networks with confidants appeared to be protected against use of high-level residential care (OR 0.53; 95%CI 0.35 – 0.81) compared to participants in the lower category of confidants social networks. Similarly, participants in the upper category for total social networks appeared to be protected against use of high-level residential care (OR 0.68; 95%CI 0.46 – 0.99).

In terms of mortality, better social networks with confidants and with friends appeared to be protective against death during the decade following the Wave 1 interview. The hazard ratio (HR) for participants in the upper category for confidants was 0.74 (95%CI

0.63-0.88) compared to participants in the lower category. For friends networks, the analogous HR was 0.75 (95%CI 0.63-0.89). Better total social networks also appeared to be protective against death over the 10 years of follow-up (HR 0.83; 95%CI 0.70-0.99).

There were few significant effects of social networks with children on the three health outcomes considered. There was little evidence of threshold effects of the specific social networks on the health outcomes.

### *Discussion*

There are important and differing effects of specific social networks on the three health outcomes of disability, residential care and mortality that were considered in this thesis. Policymakers may need to reconsider whether specific kinds of social relationships, beyond spouses and children, have been given adequate weight in current policy frameworks that address the health of older people.

## **DECLARATION**

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being made available in all forms of media, now or hereafter known.

Lynne Giles

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