

Association of Social Support Source and Size of Social Support Network With All-Cause Mortality in a National Prospective Cohort

To the Editor: We read with great interest the recent study on the influence of social support source and size of social network on all-cause mortality by Becofsky et al¹ published in the July 2015 issue of *Mayo Clinic Proceedings*. Using data from the Aerobics Center Longitudinal Study (mean age of participants, 53.0 years) located in Dallas, Texas, they examined the association of the size of social network (number of friends) and source of social support (spouse/partner, relatives, friends, and overall relationships) with all-cause mortality. They found that those receiving emotional support from relatives or spouse/partner had a 19% lower risk of all-cause mortality; those reporting contact with 6 to 7 friends weekly (vs 0-1) had a 24% lower risk of dying. These findings, and those of other investigators,² underscore the importance of initiating and maintaining social support.

As a supportive effort to complement the findings of Becofsky et al,¹ we examined the association of sources of social support and size of social network with all-cause mortality in a nationally representative sample, with emphasis on older adults (aged 60 years and older) and a comprehensive evaluation of sources of social support, uncommon in this literature.

Participants and Methods. Data from the 1999-2008 National Health and Nutrition Examination Survey were employed, with follow-up through 2011. Participants included 7441 adults aged 60 years and older (entry age for social support questions); 150 died during the first year of follow-up, leaving a study cohort of 7291

participants. Participants were asked, "Can you count on anyone to provide you with emotional support such as talking over problems or helping you make a difficult decision?" and "In the last 12 months, who was the most helpful in providing you with emotional support?" Sources evaluated include spouse, son, daughter, sibling, neighbor, co-worker, church member, professional, and friend. Regarding size of social network, participants were asked, "In general, how many close friends do you have?"

Results. The median follow-up was 77 months (range, 12-153 months); 1818 deaths occurred in 593,467 person-months accrued, for an incidence rate of 3.06 deaths per 1000 person-months. In a Cox proportional hazards model (proportional assumption not violated [$P=.62$]; Harrell *C* statistic, 0.76) using survey-based procedures, only spousal support (3411 participants had spousal support; adjusted hazard ratio [HR], 0.77; 95% CI, 0.68-0.87) was associated with reduced all-cause mortality; covariates included age, sex, race/ethnicity, measured body mass index, total cholesterol level, physical activity (yes/no) in past 30 days, smoking status, and physician-diagnosed congestive heart failure, coronary artery disease, stroke, cancer, hypertension, and diabetes.

Regarding size of social network, compared with those who had 0 close friends ($n=302$), those with 1 to 2 close friends ($n=1285$; adjusted HR, 0.67; 95% CI, 0.50-0.90), 3 to 4 close friends ($n=1489$; adjusted HR, 0.73; 95% CI, 0.55-0.98), 5 close friends ($n=961$; adjusted HR, 0.70; 95% CI, 0.52-0.93), and 6 or more close friends ($n=3254$; adjusted HR, 0.62; 95% CI, 0.46-0.83) had a reduced risk of all-cause mortality; results were unchanged when we excluded

participants with the aforementioned comorbid illnesses.

Conclusion. These findings among a national sample of older US adults confirm and complement the findings of Becofsky et al that social support and size of social network are associated with all-cause mortality. Our findings specifically highlight that spousal support and a greater size of social network are linked with better survival among this vulnerable population.

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2. Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: a meta-analytic review. *PLoS Med*. 2010;7(7):e1000316.

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In reply—Association of Social Support Source and Size of Social Support Network With All-Cause Mortality in a National Prospective Cohort

We greatly appreciate the letter to the editor submitted by Loprinzi and El-Sayed in response to our recent article.¹ In their letter, they present the results of an epidemiological investigation into the influence of social relations on all-cause mortality in a nationally representative sample of older adults from the National Health and Nutrition Examination Survey. They report that perceiving spousal support and having one or more close friends were protective against mortality. These findings