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Abstract

This article aims to contribute to the discussion of how adult children affect the well-being of their older parents by investigating the importance of living in close geographic proximity. We investigate whether having children at all, and/or having them geographically proximate, contributes differently to the well-being of older persons living with and without a partner. We enriched survey data for the Netherlands ($N = 8,379$) with municipal register data and regressed life satisfaction of persons aged 65+ on having children and three different measures of geographic proximity. Having children contributes to the well-being of older men with a partner. There is evidence for a positive association between proximity of children and parental well-being, in particular for widowed and separated mothers and for separated fathers. Our findings suggest that close proximity may be a condition under which adult

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children can significantly add to the well-being of widowed and separated mothers and separated fathers.

Keywords

intergenerational geographic proximity, older persons, parenthood, well-being, life satisfaction, register data, The Netherlands

Introduction

For older parents, adult children are often regarded as markers of personal success and social recognition. Moreover, they are a source of giving and receiving affection and are commonly the primary network members that older parents rely on for emotional and instrumental support (Bengtson, 2001; Komter & Vollebergh, 2002; Spitze & Logan, 1990). Some studies have indeed found that adult children are important to the well-being of their older parents (Hansen, Slagsvold & Moum, 2009; Margolis & Myrskylä, 2011); other studies, however, have found no significant difference between the well-being of older persons with and without children, using conventional measures of well-being (Koropeckyj-Cox, 1998; McLanahan & Adams, 1987; Zhang & Hayward, 2001).

These divergent findings suggest that there is variation in the extent to which adult children are actual sources of well-being for their parents. One possible explanation of this variation may be found in the extent to which adult children are geographically proximate to their aged parents. To our knowledge, no studies have incorporated geographic proximity of children as an explanation for well-being at older ages. Some studies have distinguished between parents with residential children and empty-nest parents (Hansen et al., 2009; McLanahan & Adams, 1987), but these focus on parenthood in general and not specifically on parenthood at older ages.

Intergenerational proximity has been shown to be associated with greater involvement of adult children and their parents in each other's lives (Lawton, Silverstein, & Bengtson, 1994). This possibly leads to stronger feelings of safety, togetherness, and belonging (Breheny & Stephens, 2009; Dunér & Nordström, 2007; Hjälm, 2012; Kunemund & Rein, 1999) and to more support exchange between family members (Bordone, 2009; Greenwell & Bengtson, 1997; Hank, 2007; Mulder & Van der Meer, 2009). In this article, we therefore aim to investigate whether adult children are particularly significant for the well-being of their older parents when they live close by. By

differentiating between having children at all and geographic proximity of adult children, we aim to contribute to a better understanding of the inconsistent findings of previous studies on the relation between having children and well-being at older ages.

Because adult children have been shown to be a more important source of emotional support for widowed and divorced people than for married older people (Dykstra, 1993), this study also aims to investigate whether having children and children living close by contribute in different ways to the well-being of older partnered persons versus older widowed or separated persons. Additionally, we consider possible differences between the gender of the parents and the adult children, because adult children may play a different role for mothers than for fathers (Rossi & Rossi, 1990; Silverstein, Gans, & Yang, 2006; Spitze & Logan, 1990).

Through record linkage of Dutch survey data from Periodiek Onderzoek Leefsituatie (POLS) from 2003 to 2006 with municipal register data, we were able to analyze the associations between having children and three different measures of geographic intergenerational proximity on one hand and the well-being of nearly 8,500 persons aged 65 years and older on the other hand. Of these, over 7,000 had children. We measured well-being with the indicator *life satisfaction*, which we treated as the dependent variable in linear regression models.

Adult Children as Resources for Physical and Social Well-Being of Older Parents

Adult children may be important to older parents' well-being, because they may provide their older parents with instrumental and emotional support. This holds especially when older parents face losses in physical and social domains of functioning. Various studies show that adult children, and daughters in particular, are more likely than any other group of potential caregivers to provide older persons with personal and practical support (Komter & Vollebergh, 2002; Spitze & Logan, 1990). As such, adult children can be seen as "resources" that older parents may rely on for their physical and social well-being.

According to the theory of social production functions (SPF theory; Lindenberg, 1996, 2013), overall well-being results from having basic physical and social needs fulfilled. SPF theory states that people try to fulfill their physical and social needs by using available resources and managing resource deficits (i.e., restrictions) as well as possible. Social relations, such as those with a partner and with adult children, can be important resources for both physical and social needs fulfillment. SPF theory was introduced by

Lindenberg (e.g., Lindenberg, 1996; Ormel, Lindenberg, Steverink, & Verbrugge, 1999), is widely used in demographic and sociological studies, and has been elaborated for aging research (e.g., Steverink, 2014; Steverink & Lindenberg, 2006; Steverink, Lindenberg, & Ormel, 1998).

A core feature of SPF theory is the mechanism of substitution or compensation (Steverink & Lindenberg, 2006; Steverink et al., 1998). The mechanism may be helpful in understanding why adult children may play a role in their parents' overall well-being, especially when the parents are old. The substitution mechanism describes how people use alternative resources to fulfill a certain need when the original resource has been lost. With increasing age, older people face not only the loss of physical resources (e.g., mobility or health) but often also the loss of social resources, such as colleagues, friends, family members, and partners. Social relations may also become more difficult to maintain due to decreasing health of oneself or one's peers (Bengtson, 2001; Van Tilburg, 1995). Support for this substitution mechanism can be found in studies that have shown that when the number of peers in an older person's social network is reduced, the family, and children in particular, becomes even more important in the lives of older persons than they already were (Bengtson, 2001; Van Gaalen & Dykstra, 2006; Van Tilburg, 1995). Adult children may therefore be important resources for the well-being of their older parents, because they are commonly the first resources that older adults turn to when the usual resources for physical and, especially, social well-being are lost with advancing age. Furthermore, following from this reasoning, the more adult children an older person has, the more alternative resources he or she has. Several studies on older persons, and comparative studies on parents experiencing the empty nest as opposed to their childless peers, indeed suggest a positive impact of adult children on the life satisfaction of their older parents (Hansen et al., 2009; Margolis & Myrskylä, 2011). We therefore hypothesize that older persons with children will have higher levels of well-being than childless older persons; and older persons with multiple children will have higher levels of well-being than older persons who only have one child (Hypothesis 1). It should be noted that previous research is not always in line with this hypothesis. Some studies show that the presence of children at older ages is not automatically associated with greater well-being (Koropeckyj-Cox, 1998; McLanahan & Adams, 1987; Zhang & Hayward, 2001), because this depends on the quality of the parent-child relationship (Koropeckyj-Cox, 2002). Furthermore, childlessness may be voluntary or involuntary, and childless persons differ in their ability to establish and maintain social networks of friends, another factor affecting late life well-being (Koropeckyj-Cox, 2002; Dykstra & Hagestad, 2007).

Geographic Proximity of Adult Children as Direct and Indirect Resources for Well-Being of Older Parents

Although the mere presence of children is deemed important, geographical proximity of children may play an additional role in older parents' well-being, because children who live close by are an even more available resource, as compared to children living further away. Geographic proximity enables various kinds of personal interaction and involvement (Lawton et al., 1994). Adult children living close by will add to their parents' well-being because they can be "used" as resources when desired or needed. They are not only actual resources but also easily accessible latent resources (Ormel et al., 1999), which may provide older parents with feelings of security and physical and social safety (cf. Dunér & Nordström, 2007; Hjälm, 2012). Based on these arguments, we hypothesize that older parents who have at least one child living close by will have higher levels of well-being than parents not having children living close by; and parents with multiple children living close by will have a higher level of well-being than parents with only one child living close by (Hypothesis 2).

Note that geographic proximity of adult children may also indirectly influence older parents' well-being because it enables more frequent contact (Bordone, 2009; Greenwell & Bengtson, 1997; Hank, 2007) and may therefore be associated with more support (Knijn & Liefbroer, 2006; Mulder & Van der Meer, 2009), stronger mutual feelings of affection (Pendell, 2002), and more opportunities for reciprocation, which may then strengthen feelings of being needed, self-esteem, and competence (Breheny & Stephens, 2009; Künemund & Rein, 1999). All these indirect effects of intergenerational geographic proximity on older parents' well-being would comprise alternative explanations of a positive association between geographic proximity and well-being. However, because contact frequency and the actual exchange of support and affection are not measured in the available data, we are not able to distinguish between direct and indirect effects.

Although we assume that close intergenerational proximity is, in general, a beneficial (latent) resource for physical and social needs of the older parents, it should be acknowledged that close proximity can also be negative or yield ambivalence because the relationship between a parent and a child may not always be positive or supportive (Lowenstein, 2007; Umberson, 1992; Van Gaalen & Dykstra, 2006). For example, parents may feel a loss of independence or self-esteem when children interfere too much in their lives. Or children may live close by because they have problems like divorce or unemployment (Smits, 2010), which may cause parental distress.

In Western cultures, daughters have been found to fulfill parental needs more adequately than sons in terms of contact frequency, support provision, and commitment (Rossi & Rossi, 1990; Silverstein et al., 2006; Spitze & Logan, 1990). Therefore, a gender differentiation needs to be made. We therefore hypothesize that older parents having daughters living close by will have higher levels of well-being than parents who only have sons living close by (Hypothesis 3).

Differential Relations Between Intergenerational Geographic Proximity and Parental Well-Being by Partnership Status

Partnership status is generally found to be related to well-being (George, 2010). A partner is often the primary resource for fulfillment of basic social needs, such as the need for affection or emotional support (De Jong Gierveld, Broese van Groenou, Hoogendoorn, & Smit, 2009), as well as physical needs, such as the need for intimacy or instrumental support (Nieboer, Lindenberg, & Ormel, 1999). The loss of a partner is therefore a major risk factor for loneliness in late life (De Jong Gierveld & Van Tilburg, 1987; Victor et al., 2002) and for dependence on others for care and help (Geerlings, Pot, Twisk, & Deeg, 2005). In this situation, the substitution mechanism of the SPF theory may be particularly helpful in understanding why adult children may play a different role in the lives of older parents living without a partner than older parents living with a partner. When a person loses his or her partner or spouse, he or she may be more likely to turn to other network members for needs fulfillment than those living with a partner. For example, intensified contact with adult children after widowhood may partially compensate for the loss of affection formerly provided by a partner. Indeed, children are a very important resource of emotional support for older persons without a partner (Dykstra, 1993). Children may also compensate for partner loss by providing other types of support formerly provided by the partner. However, the quality of the parent-child relationship seems to differ by a parent's partnership status. Divorced parents tend to have a more distant relationship with their children (Kaufman & Uhlenberg, 1998; Silverstein & Bengtson, 1997; Van Gaalen & Dykstra, 2006) and receive less instrumental support than parents in intact relationships (Dykstra, 1998). Also, divorced parents can less often rely on their children for instrumental support than widowed parents (De Jong Gierveld & Dykstra, 2002), but widowed parents tend to receive more instrumental support from their children than partnered parents (Eggebeen, 1992; Rossi & Rossi, 1990). Therefore, for all previously formulated hypotheses, we add the following specification: The expected positive

associations between having children and geographic proximity of children will be stronger for widowed than for partnered persons and stronger for widowed than for separated persons (Hypothesis 4).

Intergenerational Geographic Proximity and Parental Well-Being by Gender of the Parent

We propose specific hypotheses with regard to the relation between having children and proximity of children on one hand and the well-being of older men and women on the other hand. Previous work by Hansen, Slagsvold, and Moum (2009) indicates that the presence of children has a positive impact on the life satisfaction of women but not of men. These findings may reflect gender differences in the size, quality, and use of social networks. Women, in general, have a higher frequency of contact and a better quality of relationship with their children than men (Rossi & Rossi, 1990; Silverstein & Bengtson, 1997; Spitze & Logan, 1990; Van Gaalen & Dykstra, 2006) and receive more support from their children after divorce (Dykstra, 1998) or widowhood (Kaufman & Uhlenberg, 1998). This suggests that geographic proximity of children may contribute more to the needs fulfillment of older women than of older men. We therefore hypothesize that the positive associations between well-being and having children, and children living close by, will be stronger for older women than for older men (Hypothesis 5a). However, because men tend to rely more on their spouses and to report higher levels of loneliness in the absence of a partner (Dykstra & De Jong Gierveld, 2004), we additionally hypothesize that the positive associations between well-being and having children, and children living close by, will be greater for older widowed and separated men than for older widowed and separated women (Hypothesis 5b).

Other Demographic, Socioeconomic and Regional Factors Associated With Well-Being

We must also account for other factors known to be associated with well-being at older ages. We controlled for age, even though the relationship between age and well-being does not appear straightforward (George, Okun & Landerman, 1985). Health (Pinquart & Sørensen, 2000; Steverink, Westerhof, Bode, & Dittman-Kohli, 2001), income, and education (Pinquart & Sørensen, 2000) are important predictors of subjective well-being at older ages, as is grandparenthood (Drew & Silverstein, 2004; Muller & Litwin, 2011). Moreover, local opportunity structures determine the availability and

accessibility of various resources in fulfilling physical and social needs. In more rural areas, family ties tend to be stronger (Hogerbrugge & Dykstra, 2009; Rogerson, Weng, & Lin, 1993). However, urban areas provide a broader set of cultural and leisure facilities and offer more varied and affordable housing opportunities (Feijten, Hooimeijer, & Mulder, 2008), and professional care services are usually more available in more urban areas than more rural areas (Rijksinstituut voor Volksgezondheid en Milieu, 2012). We also account for changes through time by controlling for year of measurement.

Method

The Data Set

We derived data from the annual cross-sectional nationally representative survey POLS, which contains information on life satisfaction and health in the Netherlands (Centraal Bureau voor de Statistiek [CBS], 2011). To increase the sample size, we pooled four editions of this survey (2003–2006). We selected 9,414 persons aged 65 years and older and linked them to the municipal population register, the *Gemeentelijke Basisadministratie* (GBA) through collaboration with Statistics Netherlands (CBS, 2010a, 2010b). In this way, place of residence of both parents and children could be identified and intergenerational geographic distance could be calculated. Next to sample size, this opportunity to match POLS to the population register was a major reason for selecting POLS rather than other commonly used data sets (such as The Longitudinal Aging Study Amsterdam [LASA]). Children could be of any age; yet the vast majority was aged 25 or older. As only addresses of persons registered in the Netherlands were available, dyads in which the parent or the child lived abroad for the entire period of 1995–2009 could not be captured. Because coresidence of adult children with their older parents is fundamentally different from children living close by (Isengard & Szydlik, 2012; Pillemer & Suitor, 1991; Smits, 2010), we excluded 466 persons who coresided with a least one child. We excluded 41 persons for whom the place of residence of the parent or the child was unknown and another 130 persons owing to missing information on income, education, health, or degree of urbanization. Among those living without a partner, we excluded those who had never married, because they are different from separated and widowed persons and their number was too small for separate analyses to be performed ($N = 398$). This selection procedure left us with 8,379 persons aged 65 years and above, of whom 90.9% had children registered in the Netherlands.

Dependent Variable

Well-being was measured by the indicator *life satisfaction*, obtained from the POLS survey. Life satisfaction is a component of well-being and reflects the cognitive evaluation of well-being based on comparisons of actual achievements with aspired conditions and has been widely used to describe global judgments of satisfaction with life as a part of subjective well-being (Diener, Suh, Lucas, & Smith, 1999). According to Pavot, Diener, Colvin, and Sandvik (1991), the indicator has been shown to be a valid and reliable measure of life satisfaction, suitable for a wide range of age-groups. According to them, subjective well-being is a relatively global and stable phenomenon, and not simply a momentary judgment, as is demonstrated by the high convergence of self- and peer-reported measures.

We used the question “To what extent are you satisfied with your current life?” measured on a 5-point scale: *not so satisfied*, *quite satisfied*, *satisfied*, *very satisfied*, and *extremely satisfied*. We did not consider the well-being component “happiness” because the distribution of happiness was highly skewed: 84% claimed to be very happy and 11% happy.

Explanatory Variables

Having children was measured with the variable *number of children* (0, 1, 2, 3, and 4+). We created three measurements covering varying aspects of intergenerational geographic proximity. We measured geographic proximity by the length of a straight line between the geographical midpoints of the neighborhoods of residence of both parent and child at the time of the survey. The variable *geographic proximity to closest child* has three categories: within 5 km, between 5 and 20 km, and further than 20 km. We reasoned that living within 5 km would enable daily face-to-face contact without too many time constraints; living between 5 and 20 km away would allow regular visits, though requiring more effort; and living further than 20 km away would reduce regular face-to-face contact (Knijn & Liefbroer, 2006). To test for the association between well-being and having multiple children living close by, we constructed the variable *number of children within 5 km*, with three categories; no child within 5 km, one child within 5 km, and two or more children within 5 km. The variable *sons or daughters within 5 km* enabled us to test whether daughters were a more important resource than sons. *Partnership status* was taken from the POLS survey and categorized as living together with a partner (either married or not), living without a partner and being widowed, and living without a partner and

being separated. Those who were married but lived without a partner were considered separated ($N = 76$).

Control Variables

The controls *age*, *health*, *household income*, and *education* were taken from the POLS survey. *Age* was treated as a continuous variable. For health, we introduced the variables *disability* and *perceived health*. Those who reported at least one chronic disease that caused moderate or severe restrictions in daily household activities were labeled “disabled” and all others as “non-disabled.” Perceived health was assessed by the question, “How is your health in general?” and treated as a continuous variable. *Education* was classified according to three educational levels: low (primary school and lower vocational education), middle (secondary school and intermediate vocational education), and high (higher vocational education and university) education. We measured *household income* using the standard equivalized household income calculated by Statistics Netherlands: The total net income of the household was divided by a factor reflecting household composition (single-person household = 1.00, every additional adult increases the factor by 0.37; CBS, 2008). The equivalized income was divided into quartiles, with the cutoff points for the quartiles calculated separately for all persons and for parents. The variables *having grandchildren* and *degree of urbanization* were derived from the population register. Having grandchildren was defined by whether the person had a grandchild registered in the Netherlands between 1995 and when the POLS survey was taken. Degree of urbanization was provided by Statistics Netherlands and was based on address density at the neighborhood level (urban: 1,500 or more addresses per km², suburban: 500 to 1,500 addresses per km², rural: fewer than 500 addresses per km²).

Table 1 presents the distributions of all variables by having children and partnership status. Persons with a partner were more satisfied with their lives than persons without a partner, whereas widowed persons without a partner lived closest to their children. For the subsample of persons with children, Table 1 also shows the results of a two-sample Kolmogorov–Smirnov test for the differences in distribution between partnered and widowed parents and between widowed and separated parents.

Analyses

We ran four sets of linear regression models with similar sets of control variables. The first set of models estimated the associations between having

Table 1. Frequency Distribution of Dependent and Independent Variables, in Percentages.

	With partner		Without partner, widowed		Without partner, separated		Widowed vs. partnered	Widowed vs. separated
	All	With children	All	With children	All	With children	p Value ^a	p Value ^a
Life satisfaction, mean (SD)	3.4 (0.8)	3.4 (0.8)	3.0 (0.8)	3.0 (0.8)	3.0 (0.9)	3.0 (0.9)	.000	.000
Age, mean (SD)	72.2 (5.6)	72.1 (5.6)	77.4 (6.7)	77.3 (6.7)	72.6 (6.1)	72.6 (6.1)	.000	.383
Distance to closest child, mean (SD)		20.5 (37.2)		12.2 (28.5)		21.8 (38.3)	.000	.000
Perceived health, mean (SD)	3.7 (0.8)	3.7 (0.8)	3.5 (0.8)	3.5 (0.8)	3.6 (0.9)	3.6 (0.9)	.000	.270
Gender							.000	.000
Female	43.3	43.3	80.1	80.2	60.2	61.7		
Male	56.7	56.7	19.9	19.8	39.8	38.3		
Number of children							.000	.004
One child	11.9	12.9	13.1	14.9	13.9	15.4		
Two children	34.7	37.6	26.5	30.1	32.0	35.3		
Three children	24.5	26.6	20.8	23.6	24.5	27.1		
Four or more children	21.0	22.8	27.7	31.4	20.2	22.3		
No children at all	7.9	n.a.	11.9	n.a.	9.4	n.a.		
Disability							.000	.367
Nondisabled	65.2	65.3	54.5	54.8	58.6	59.5		
Disabled	34.8	34.7	45.5	45.2	41.4	40.4		
Having grandchildren							.000	.000
Yes	64.5	70.0	77.3	87.8	65.3	72.1		
No	65.5	30.0	22.7	12.2	34.7	27.9		
Educational level							.000	.000
High	16.2	24.2	7.9	14.3	18.8	26.6		
Middle	34.1	20.6	26.3	17.6	32.2	19.5		
Low	49.7	55.3	65.8	68.1	49.0	53.9		

(continued)

Table 1. (continued)

	With partner		Without partner, widowed		Without partner, separated		Widowed vs. partnered		Widowed vs. separated	
	All	With children	All	With children	All	With children	All	p Value ^a	All	p Value ^a
		children		children		children				
Household income										
First quartile	7.8	7.8	58.4	58.9	59.8	61.0		.000		.925
Second quartile	28.5	28.9	18.9	18.8	14.1	13.9				
Third quartile	30.9	30.8	12.7	12.8	16.9	16.2				
Fourth quartile	32.8	32.5	9.9	9.5	9.2	8.9				
Degree of urbanization										
Rural	15.8	16.1	13.9	14.5	8.6	8.0		.000		.000
Suburban	46.2	46.3	42.4	42.5	33.9	34.8				
Urban	38.0	37.6	43.7	43.0	57.5	57.1		1.000		.999
Survey year										
2003	34.1	34.4	34.1	33.6	34.3	34.2				
2004	34.9	34.7	34.8	35.1	33.1	33.1				
2005	16.2	15.9	15.4	15.2	17.3	17.1				
2006	14.8	14.9	15.8	16.1	15.3	15.6		.000		.000
Geographic proximity of closest child										
Within 5 km		55.3		68.1		53.9				
Between 5 and 20 km		20.6		17.6		19.5				
Further than 20 km		24.2		14.3		26.6		.002		.001
Number of children within 5 km										
No child within 5 km		32.2		27.3		37.7				
One child within 5 km		33.6		33.9		32.7				
Two or more children within 5 km		34.3		38.8		29.7				

(continued)

Table 1. (continued)

	With partner		Without partner, widowed		Without partner, separated		Widowed vs. partnered		Widowed vs. separated	
	All	With children	All	With children	All	With children	p Value ^a		p Value ^a	
Sons or daughters within 5 km										
No children within 5 km		32.2		27.3		37.7				.001
Only sons within 5 km		24.7		26.7		22.7				
Only daughters within 5 km		23.1		22.1		21.6				
Sons and daughters within 5 km		20.0		23.9		18.0				
N	5,546	5,108	2,323	2,046	510	462				
%	66.2	67.1	27.7	26.9	6.1	6.1				

Source: Statistics Netherlands (CBS, 2010a, 2010b, 2011).

^aTwo-sample Kolmogorov–Smirnov test for equality of distribution functions, tested on subsample parents.

children and parental life satisfaction for all persons aged 65 years and older. In order to test our hypotheses on the associations between intergenerational geographic proximity and life satisfaction, we ran three sets of models for parents that each included an alternative measure of geographic proximity: proximity to closest child, number of children within 5 km, and having sons or daughters within 5 km.

Because we were interested in the extent to which geographic proximity and all other factors are related to the well-being of older persons with and without a partner in different ways, we ran all models separately for all persons and for parents, distinguishing between those with a partner, widowed, and separated persons. Because we also expected geographic proximity to have a different association with the life satisfaction of older men and women, the models were also run separately by gender. The statistical power of these separate models was limited, however.

Parameters with p values smaller than .05 were considered statistically significant. Because the samples were small in the separate analyses for men and women, parameters with p values smaller than .10 were considered to be interest for those analyses. We performed statistical tests to compare the coefficients across the subgroups “partnered,” “widowed,” and “separated” using seemingly unrelated regression (SUR). We also performed these tests to compare the coefficients for men and women. These tests were performed with the use of SUR estimates. Because we were interested in the effects of more than one explanatory variable on well-being of different subgroups, we preferred to run separate models for different subgroups rather than estimating the model for the complete sample and adding interactions.

It should be borne in mind that there might be endogeneity issues in our analyses because some parents or children might have moved closer to each other, or refrained from moving away, in hopes of improving well-being or in response to problems affecting well-being. From other studies, however, we know that relocating in order to live closer to parents or children is not common in the Netherlands and mostly seems to be in response to the adult child’s needs rather than the parents’ (Smits, 2010). We considered using a technical solution to deal with potential endogeneity problems, using two-stage models. To use such models, we would need exogenous variables that affected geographic proximity but were not associated with life satisfaction. We could not find such variables in our data, however. Therefore, we maintain caution and approach the relationships between geographic proximity and well-being as associations rather than causal relations.

Results

The results in Table 2 show the tests of Hypothesis 1 and the associations between gender and the control variables with life satisfaction. Hypothesis 1 stated that older persons with children have higher levels of well-being than childless older persons and that older persons with multiple children have higher levels of well-being than older persons with only one child. The results largely support this hypothesis for persons with a partner: The parameters for all categories with children are positive and statistically significant compared with the reference category without children, although the parameters for categories with multiple children are not much larger than for the category with only one child. However, for widowed and separated persons, none of the parameters is significant.

We also found some significant associations between gender and the control variables with life satisfaction (Table 2). Women reported somewhat lower life satisfaction than men, but this only holds among the partnered. Disabled persons and persons with poor perceived health were less satisfied with life. Having grandchildren did not relate significantly to life satisfaction. Both household income and education contributed positively to life satisfaction. Persons living in more rural areas appeared to be more satisfied with life as compared with those living in urban areas. Interestingly, we found a negative association between age and life satisfaction for persons with a partner, but a positive association for widowed persons. Except for the marginally significant finding that older widowed persons in the 2006 survey were more satisfied than those in the 2003 survey, there were no notable changes in life satisfaction over the survey years. Hypothesis 2 stated that older parents with at least one child living close by would have higher levels of well-being than those without children living close by; and parents with multiple children living close by would have a higher level of well-being than those with only one child living close by. The three models in Table 3, which take into account the different measures of geographic proximity, reveal only few statistically significant associations between geographic proximity of children and parental well-being. The results provide some support for Hypothesis 2, showing that parental well-being is greater when multiple children live close by, but this only holds for separated parents (second panel of Table 3). For the other categories, we find positive but nonsignificant associations.

Hypothesis 3 stated that older parents with daughters living close by would have higher levels of well-being than those with only sons living close by. In line with this hypothesis, our findings indicate that parents with a

Table 2. Results from Linear Regression Models of Life Satisfaction Including Number of Children.

	With partner		Without partner, widowed		Without partner, separated		Widowed vs. partnered		Widowed vs. separated	
	B	SE	B	SE	B	SE	B	SE	B	SE
Number of children										
One child	0.112*	0.049	-0.006	0.075	-0.078	0.168				
Two children	0.114*	0.045	-0.018	0.075	-0.148	0.154	*		*	
Three children	0.130**	0.047	0.069	0.079	0.076	0.162	*		*	
Four or more children	0.184***	0.049	0.072	0.079	0.024	0.169	***		***	
No children at all	0		0		0					
Age	-0.003	0.002	0.010***	0.002	-0.007	0.006			***	
Gender										
Female	-0.057*	0.023	0.069	0.043	0.018	0.083			*	
Male	0		0		0					
Disability										
Disabled	-0.140***	0.026	-0.051***	0.038	-0.076	0.094			***	
Nondisabled	0		0		0					
Perceived health	0.301***	0.016	0.282***	0.024	0.318***	0.054				
Having grandchildren										
Yes	0.014	0.026	0.021	0.058	0.019	0.096				
No	0		0		0					
Educational level										
Low	0		0		0					
Middle	0.021	0.025	-0.005	0.040	0.008	0.090				
High	0.050	0.034	0.111	0.067	0.234*	0.114			*	

(continued)

Table 2. (continued)

	With partner		Without partner, widowed		Without partner, separated		Widowed vs. partnered		Widowed vs. separated	
	B	SE	B	SE	B	SE	B	SE	B	SE
Household income										
First quartile	0		0		0		0			
Second quartile	0.028	0.042	0.045	0.043	0.100	0.112				
Third quartile	0.056	0.042	0.027	0.053	-0.033	0.111				
Fourth quartile	0.137**	0.043	-0.032	0.060	0.107	0.140	**			
Degree of urbanization										
Rural	0.022	0.031	0.059	0.050	0.244	0.138				
Suburban	0.035	0.023	0.075*	0.035	0.039	0.083	*			
Urban	0		0		0					
Survey year										
2003	0		0		0					
2004	-0.035	0.025	0.068	0.039	0.124	0.092				
2005	-0.009	0.031	0.066	0.050	0.147	0.111				
2006	-0.057	0.032	0.091*	0.049	0.144	0.117	*			
Intercept	2.499***	0.167	1.030***	0.232	2.331***	0.573				
Model summaries										
N	5,546		2,323		510					
R ²	.143		.103		.162					
Degrees of freedom	19		19		19					

Source. Statistics Netherlands (CBS, 2010a, 2010b, 2011).

Note. ***p < .001. **p < .01. *p < .05.

Table 3. Results From Three Sets of Regression Models Including Different Measures of Intergenerational Geographic Proximity: Persons With Children.

	With partner		Without partner, widowed		Without partner, separated		Widowed vs. partnered		Widowed vs. separated	
	B	SE	B	SE	B	SE	B	SE	B	SE
<i>Geographic proximity of closest child (R²)</i>										
Within 5 km	0.133		0.103		0.162					
Between 5 and 20 km	0.020	0.028	0.065	0.053	-0.009	0.104				
Further than 20 km	0.053	0.033	0.009	0.062	-0.153	0.121				
0	0		0		0					
<i>Number of children within 5 km (R²)</i>										
No child within 5 km	0.132		0.104		0.165					
One child within 5 km	-0.009	0.027	-0.020	0.044	0.070	0.097				
0	0		0		0					
2+ children within 5 km	0.023	0.026	0.078	0.041	0.208*	0.102				*
<i>Sons or daughters within 5 km (R²)</i>										
No children within 5 km	0.133		0.103		0.161					
Only sons within 5 km	0.019	0.029	-0.076	0.047	0.026	0.108				
0	0		0		0					
Only daughters within 5 km	0.045	0.032	-0.053	0.049	0.022	0.119				
Sons and daughters within 5 km	0.081*	0.032	-0.004	0.048	0.154	0.126				*
N persons with children	5,108		2,046		4628					

Source: Statistics Netherlands (CBS, 2010a, 2010b, 2011).

Note: * $p < .05$. ** $p < .01$. *** $p < .001$

partner were more satisfied with life when they had both sons and daughters living close by than only sons (third panel of Table 3). For widowed parents, however, no such association was found; and for separated parents, the association was positive but insignificant.

Hypothesis 4, which stated that the expected positive associations between the presence and geographic proximity of children would be strongest for widowed persons, is tested in Tables 2 and 3. Contrary to the hypothesis, life satisfaction was greater when having (multiple) children, particularly for partnered rather than widowed and separated persons. The positive association with having both sons and daughters living close by was also significantly stronger for partnered than widowed and separated parents. Apparently, having children strengthens the already positive effect on well-being of having a partner, whereas having children does not seem to compensate for widowhood. Between widowed and separated persons, we found no significant differences in the association of well-being with having children. Separated parents, however, were significantly more satisfied with life when at least two children were living close by, whereas this was not the case for widowed parents.

In Table 4, the models are stratified by gender to test Hypotheses 5a and 5b. These stated that the positive associations between well-being and having children, and children living close by, would be stronger for older women than for older men (Hypothesis 5a), and that these positive associations would be stronger for widowed and separated older men than for widowed and separated older women (Hypothesis 5b). A positive association between having children and the life satisfaction of older persons with a partner was found for men but not for women (first panel of Table 4), which contrasts with Hypothesis 5a. For widowed and separated persons without a partner, we found no differences between men and women, which does not support Hypothesis 5b. Altogether, these findings indicate that having children is associated most with the life satisfaction of older men with a partner.

The models concerning geographic proximity show several significant or marginally significant ($p < .10$) associations between geographic proximity and life satisfaction by gender but do not provide support for Hypothesis 5a. Nor do the findings confirm the additional expectation that men without a partner would benefit more from children living close by than their female counterparts. However, the large positive coefficient for separated fathers with both sons and daughters living close by seems to indicate that this category does benefit from having children living close by. It is worthwhile mentioning that all regression models showed a clear difference between the levels of the intercept by partnership status. Given the values of the

Table 4. Results From Four Linear Regression Models on Presence and Geographic Proximity of Children on Life Satisfaction, Stratified by Gender.

	With partner				Without partner, widowed				Without partner, separated			
	Men		Women		Men		Women		Men		Women	
	B	δ vs. η	B	δ vs. η	B	δ vs. η	B	δ vs. η	B	δ vs. η	B	δ vs. η
<i>Model Number of children (R²)</i>												
One child	0.146	0.137	0.088	0.113	0.088	0.113	0.088	0.113	0.174	0.226	0.174	0.226
Two children	0.133*	0.048	0.037	-0.056	0.037	-0.056	0.037	-0.056	-0.046	-0.144	-0.046	-0.144
Three children	0.134*	0.050	-0.025	-0.069	-0.025	-0.069	-0.025	-0.069	0.041	-0.239	0.041	-0.239
Four or more children	0.158**	0.054 *	0.070	0.021	0.070	0.021	0.070	0.021	0.333	-0.081	0.333	-0.081
No children at all	0.227***	0.091 **	0.085	0.017	0.085	0.017	0.085	0.017	-0.052	0.070	-0.052	0.070
N persons	0	0	0	0	0	0	0	0	0	0	0	0
	3,147	2,399	462	1,861	462	1,861	462	1,861	203	307	203	307
<i>Model Geo. proximity of closest child (R²)</i>												
Within 5 km	0.136	0.126	0.093	0.112	0.093	0.112	0.093	0.112	0.186	0.204	0.186	0.204
Between 5 and 20 km	0.025	0.006	-0.006	0.112#	-0.006	0.112#	-0.006	0.112#	-0.094	0.056	-0.094	0.056
Further than 20 km	0.062	0.039	-0.163	0.097	-0.163	0.097	-0.163	0.097	-0.273	-0.027	-0.273	-0.027
<i>Model number of children within 5 km (R²)</i>												
No child within 5 km	0	0	0	0	0	0	0	0	0	0	0	0
One child within 5 km	0.136	0.126	0.092	0.112	0.092	0.112	0.092	0.112	0.180	0.214	0.180	0.214
2+ children within 5 km	-0.028	0.023	-0.065	-0.014	-0.065	-0.014	-0.065	-0.014	0.153	0.030	0.153	0.030
<i>Model Sons or daughters within 5 km (R²)</i>												
No children within 5 km	0	0	0	0	0	0	0	0	0	0	0	0
Only sons within 5 km	0.025	0.020	0.095	0.071	0.095	0.071	0.095	0.071	0.135	0.228#	0.135	0.228#
Only daughters within 5 km	0.137	0.127	0.092	0.112	0.092	0.112	0.092	0.112	0.203	0.204	0.203	0.204
Sons and daughters within 5 km	-0.014	0.062	-0.152	-0.065	-0.152	-0.065	-0.152	-0.065	0.340#	-0.088	0.340#	-0.088
Only sons within 5 km	0	0	0	0	0	0	0	0	0	0	0	0
Only daughters within 5 km	0.016	0.071	-0.022	-0.067	-0.022	-0.067	-0.022	-0.067	0.275	-0.050	0.275	-0.050
Sons and daughters within 5 km	0.074#	0.088# *	-0.102	0.011	-0.102	0.011	-0.102	0.011	0.525*	-0.002	0.525*	-0.002
N persons with children	2,898	2,210	406	1,640	406	1,640	406	1,640	177	285	177	285

Source: Statistics Netherlands (CBS, 2010a, 2010b, 2011).

Note. ***p < .001. **p < .01. *p < .05. #p < .10.

Control variables in all models: age, disability, perceived health, having grandchildren, education, household income, degree of urbanization, and survey year.

independent variables, life satisfaction was estimated to be greatest for persons with a partner and lowest for widowed persons, indicating the importance of having a partner for life satisfaction.

Discussion

Although children are important resources for giving and receiving affection and are commonly the primary network members relied on for personal and practical support, previous studies show mixed evidence as to whether having children is associated with greater well-being at older ages. In this study, we investigated whether geographic proximity of children is a meaningful concept to broaden our understanding of how having children is associated with the well-being of older persons. We measured well-being by a commonly used 5-point scale for life satisfaction, which reflects the cognitive evaluation of well-being (Diener et al., 1999). We argued that the substitution mechanism of the SPF theory may be helpful in understanding why adult children can play a role in older persons' well-being. Adult children may be important resources for older persons' physical and social needs fulfillment, because adult children often are latent resources that can be fallen back on, when usual resources are lost with aging. Additionally, adult children may be an even more valuable resource when they live close by, because they are more easily accessible than children living further away. This, we argued, would hold even more for daughters than for sons. Moreover, geographically proximate adult children were hypothesized to be especially likely to be important resources for their older parents' well-being when these parents do not have a partner.

First of all, we found that having children, as compared to being childless, is associated with life satisfaction of older persons, and having multiple children shows an even stronger association than having only one child. However, this finding holds only for partnered men and not for partnered women, widowed, and separated older persons.

The absence of an effect among partnered women is unexpected and hard to interpret. We might speculate that partnered older women have sufficient other resources for affection and support (e.g., female friends) and depend less on their adult children for their social need fulfillment than older partnered men (Stevens, 1995). With regard to the absence of an effect among widowed and separated persons, we might speculate that the detrimental emotional consequences of widowhood and divorce cannot just be compensated for by having children (see also Hansen et al., 2009).

Concerning geographic proximity, our findings indicate that children living close by do not clearly add to the life satisfaction of older parents living with a partner, which supports the idea that a partner commonly is the primary and most proximate resource for needs fulfillment. However, our findings do seem to indicate that older widowed and separated mothers, and separated fathers, benefit from having children living close by. This accords with the substitution mechanism as proposed by the SPF theory and also corresponds with work of others (Bengtson, 2001; Riley & Riley, 1993; Van Tilburg, 1995) showing that adult children are significant latent resources that can be activated in times of need. Our finding that intergenerational geographic proximity seems to particularly enhance the well-being of widowed women, but not of widowed men, is in accordance with previous findings that children have better relationships with their widowed mothers than with their widowed fathers (Kaufman & Uhlenberg, 1998; Silverstein, & Bengtson, 1997). Our hypothesis that widowed parents would benefit even more from children living close by than separated parents was not confirmed. Rather, we found that especially separated fathers benefit from having children close by, which is surprising considering the literature on parent-child relations that often shows that the quality of the relation is poorest for divorced fathers (Dykstra, 1998; Kalmijn, 2013; Silverstein & Bengtson, 1997).

Our study has strengths but also limitations. One strength is that the municipal register data enriched the survey data substantively by matching children and their residential locations with their older parents, from which we could obtain various measures of intergenerational geographic proximity. We faced several data limitations, however. The data did not allow us to work with any components of well-being other than life satisfaction, and the measurement of life satisfaction was limited to one single question. The study was also limited by the lack of information about the frequency of contact and the actual exchange of support between parents and children. Our hypotheses concerning the associations between intergenerational geographic proximity and parental well-being were based on the assumption that geographic proximity would facilitate the “use” of proximate children as resources, either actual or latent. The link between proximity and well-being could also be indirect: Proximity could lead to more contact and more support exchange, which then adds to well-being. Our data do not contain any information as to whether proximate children indeed have more contact with, and provide more support to, their older parents than more distant children. Incorporating information about the frequency of contact and exchange of actual support would allow a clearer distinction between the direct and indirect effects of intergenerational geographic proximity on parental well-

being. Yet, it should be noted that frequent contact and support exchange might not always lead to greater well-being, because they may generate more conflict and ambivalence about the relationship as well (Van Gaalen & Dykstra, 2006). Taking relationship quality into account would therefore also be helpful.

Controlling for additional sociodemographic characteristics of the children, for instance marital or employment status, could possibly provide more insights into who of the children are more important for parental well-being. The available data also did not allow us to address potential problems related to endogeneity. It is therefore uncertain as to whether close geographic proximity leads to greater satisfaction with life, or whether poor parental life satisfaction may induce parents to move closer to children, or may make children hesitant about moving away from their parents. This problem could perhaps partly, though probably not completely, be solved using longitudinal data. Our findings apply to the Netherlands, where a substantial part of instrumental support is provided through subsidized services, and possibly to similar welfare states. They might not be applicable for societies in which formal services are more difficult and costly to access.

We recommend that future studies attempt to disentangle the direct and indirect effects of geographic proximity of adult children for their older parents' well-being, in order to understand its implications in different situations, for example, in countries where children live much farther from their parents than in the Netherlands. In all, we have contributed to the literature on how adult children add to the well-being of their older parents by incorporating geographic proximity and by revealing some of the complex differences between older men and women with and without a partner.

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Authors' Note

M. van der Pers performed all statistical analyses and wrote the article. C. H. Mulder supervised the data analyses and contributed to revise the article. N. Steverink helped to plan the study and contributed to revise the article.

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References

- Bengtson, V. L. (2001). The Burgess award lecture: Beyond the nuclear family: The increasing importance of multigenerational bonds. *Journal of Marriage and Family, 63*, 1–16.
- Bordone, V. (2009). Contact and proximity of older people to their adult children: A comparison between Italy and Sweden. *Population, Space and Place, 15*, 359–380.
- Breheny, M., & Stephens, C. (2009). ‘I sort of pay back in my own little way’: Managing independence and social connectedness through reciprocity. *Ageing and Society, 29*, 1295–1313.
- Centraal Bureau voor de Statistiek. (2008). *Documentatierapport Integraal Huishoudens Inkomen 2007V2*. Den Haag/Heerlen: Author.
- Centraal Bureau voor de Statistiek. (2010a). *Database Gemeentelijke Basisadministratie (GBA) 1995-2009v1*. Den Haag/Heerlen: Author.
- Centraal Bureau voor de Statistiek. (2010b). *Database GBA-Ouder-Kind (GBA-OK) 1995-2009v1*. Den Haag/Heerlen: Author.
- Centraal Bureau voor de Statistiek. (2011). *Database Periodiek Onderzoek Leefsituatie (POLS) POLSBasis 2003-2006*. Den Haag/Heerlen: Author.
- De Jong Gierveld, J., Broese van Groenou, M., Hoogendoorn, A. W., & Smit, J. H. (2009). Quality of marriages in later life and emotional and social loneliness. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 64B*, 497–506.
- De Jong Gierveld, J., & Dykstra, P. A. (2002). The long-term rewards of parenting. *Ageing International: Journal of the International Federation on Ageing, 27*, 49–69.
- De Jong Gierveld, J., & Van Tilburg, T. G. (1987). The partner as source of social support in problem and non-problem situations. *Journal of Social Behavior and Personality, 2*, 191–200.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276–302.
- Drew, L. M., & Silverstein, M. (2004). Inter-generational role investments of great-grandparents: Consequences for psychological well-being. *Ageing & Society, 24*, 95–111.
- Dunér, A., & Nordström, M. (2007). The roles and functions of the informal support networks of older people who receive formal support: A Swedish qualitative study. *Ageing and Society, 27*, 67–85.

- Dykstra, P. A. (1993). The differential availability of relationships and the provision and effectiveness of support to older adults. *Journal of Social and Personal Relationships, 10*, 355–370.
- Dykstra, P. A. (1998). The effects of divorce on intergenerational exchanges in families. The Netherlands. *Journal of Social Sciences, 33*, 77–93.
- Dykstra, P. A., & De Jong Gierveld, J. (2004). Gender and marital-history differences in emotional and social loneliness among Dutch older adults. *Canadian Journal on Aging, 23*, 141–155.
- Dykstra, P. A., & Hagestad, G. O. (2007). Childlessness and parenthood in two centuries. *Journal of Family Issues, 28*, 1518–1532.
- Eggebeen, D. J. (1992). Family structure and intergenerational exchanges. *Research on Aging, 14*, 427–447.
- Feijten, P., Hooimeijer, P., & Mulder, C. H. (2008). Residential experience and residential environment choice over the life-course. *Urban Studies, 45*, 141–162.
- Geerlings, S. W., Pot, A. M., Twisk, J. W. R., & Deeg, D. J. H. (2005). Predicting transitions in the use of informal and professional care by older adults. *Ageing and Society, 25*, 111–130.
- George, L. K. (2010). Still happy after all these years: Research frontiers on subjective well-being in later life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 65B*, 331–339.
- George, L. K., Okun, M. A., & Landerman, R. (1985). Age as a moderator of the determinants of life satisfaction. *Research on Aging, 7*, 209–33.
- Greenwell, L., & Bengtson, V. L. (1997). Geographic distance and contact between middle-aged children and their parents: The effects of social class over 20 years. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 52B*, S13–S26.
- Hank, K. (2007). Proximity and contacts between older parents and their children: A European comparison. *Journal of Marriage and Family, 69*, 157–173.
- Hansen, T., Slagsvold, B., & Moum, T. (2009). Childlessness and psychological well-being in midlife and old age: An examination of parental status effects across a range of outcomes. *Social Indicators Research, 94*, 343–362.
- Hjälml, A. (2012). ‘Because we know our limits’. Elderly parents’ views on intergenerational proximity and intimacy. *Journal of Aging Studies, 26*, 296–308.
- Hogerbrugge, M. J. A., & Dykstra, P. A. (2009). The family ties of unmarried cohabiting and married persons in the Netherlands. *Journal of Marriage and Family, 71*, 135–145.
- Isengard, B., & Szydlik, M. (2012). Living apart (or) together? Coresidence of elderly parents and their adult children in Europe. *Research on Aging, 34*, 449–474.
- Kalmijn, M. (2013). Relationships between fathers and adult children: The cumulative effects of divorce and repartnering. *Journal of Family Issues*. doi: 10.1177/0192513X13495398

- Kaufman, G., & Uhlenberg, P. (1998). Effects of life course transitions on the quality of relationships between adult children and their parents. *Journal of Marriage and Family*, *60*, 924–938.
- Knijff, T., & Liefbroer, A. (2006). More kin than kind: Instrumental support in families. In P. A. Dykstra, M. Kalmijn, T. Knijn, A. Komter, A. Liefbroer, & C. H. Mulder (Eds.), *Family solidarity in the Netherlands* (Chap. 4, pp. 89–106). Amsterdam, The Netherlands: Dutch University Press.
- Komter, A. E., & Vollebergh, W. A. M. (2002). Solidarity in Dutch families. *Journal of Family Issues*, *23*, 171–188.
- Koropecj-Cox, T. (1998). Loneliness and depression in middle and old age: Are the childless more vulnerable? *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *53B*, S303–S312.
- Koropecj-Cox, T. (2002). Beyond parental status: Psychological well-being in middle and old age. *Journal of Marriage and Family*, *64*, 957–951.
- Künemund, H., & Rein, M. (1999). There is more to receiving than needing: Theoretical arguments and empirical explorations of crowding in and crowding out. *Ageing and Society*, *19*, 93–121.
- Lawton, L., Silverstein, M., & Bengtson, V. L. (1994). Affection, social contact, and geographic distance between adult children and their parents. *Journal of Marriage and Family*, *56*, 57–68.
- Lindenberg, S. (1996). Continuities in the theory of social production functions. In H. Ganzeboom & S. en Lindenberg (Eds.), *Verklarende sociologie: Opstellen voor reinhard wippler* (pp. 169–184). Amsterdam, The Netherlands: Thesis.
- Lindenberg, S. (2013). Social rationality, self-regulation, and well-being: The regulatory significance of needs, goals, and the self. In R. Wittek, T. A. B. Snijders, & V. Nee (Eds.), *Handbook of rational choice social research* (pp. 72–112). Stanford, CA: Stanford University Press.
- Lowenstein, A. (2007). Solidarity-conflict and ambivalence: Testing two conceptual frameworks and their impact on quality of life for older family members. *Journal of Gerontology: Social Sciences*, *62B*, S100–S107.
- Margolis, R., & Myrskylä, M. (2011). A global perspective on happiness and fertility. *Population and Development Review*, *37*, 29–56.
- McLanahan, S., & Adams, J. (1987). Parenthood and psychological well being. *Annual Review of Sociology*, *13*, 237–257.
- Mulder, C. H., & Van der Meer, M. J. (2009). Geographical distances and support from family members. *Population, Space and Place*, *15*, 381–399.
- Muller, Z., & Litwin, H. (2011). Grandparenting and psychological well-being: How important is grandparent role centrality? *European Journal of Ageing*, *8*, 109–118.
- Nieboer, A. P., Lindenberg, S., & Ormel, J. (1999). Conjugal bereavement and well-being of elderly men and women: A preliminary study. *Omega*, *38*, 113–141.

- Ormel, J., Lindenberg, S., Steverink, N., & Verbrugge, L. M. (1999). Subjective well-being and social production functions. *Social Indicators Research*, *46*, 61–90.
- Pavot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, *57*, 149–161.
- Pendell, S. D. (2002). Affection in interpersonal relationships: Not just a ‘fond or tender feeling’. In W. B. Gudykunst (Eds.), *Communication Yearbook 26* (pp. 70–115). Mahwah, NJ: Lawrence Erlbaum.
- Pillemer, K., & Suitor, J. J. (1991). Relationships with children and distress in the elderly. In K. Pillemer & K. McCartney (Eds.), *Parent–child relations throughout life* (pp. 163–179). Hillsdale, NJ: Lawrence Erlbaum.
- Pinquart, M., & Sörensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging*, *15*, 187–224.
- Riley, M. W., & Riley, J. W. (1993). Connections: Kin and cohort. In V. L. Bengtson & W. A. Achenbaum (Eds.), *The changing contract across generations* (pp. 169–189). New York, NY: Aldine de Gruyter.
- Rijksinstituut voor Volksgezondheid en Milieu. (2012). Volksgezondheid Toekomst Verkenning, Nationale Atlas Volksgezondheid. Version 4.9. Bilthoven, the Netherlands: Author.
- Rogerson, P. A., Weng, R. H., & Lin, G. S. (1993). The spatial separation of parents and their adult children. *Annals of the Association of American Geographers*, *83*, 656–671.
- Rossi, A. S., & Rossi, P. H. (1990). *Of human bonding: Parent-child relations across the life course*. New York, NY: Aldine de Gruyter.
- Silverstein, M., & Bengtson, V. L. (1997). Intergenerational solidarity and the structure of adult child–parent relationships in American families. *American Journal of Sociology*, *103*, 429–460.
- Silverstein, M., Gans, D., & Yang, F. M. (2006). Intergenerational support to aging parents: The role of norms and needs. *Journal of Family Issues*, *27*, 1068–1084.
- Smits, A. W. M. (2010). Moving close to parents and adult children in the Netherlands: The influence of support needs. *Demographic Research*, *22*, 985–1014.
- Spitze, G., & Logan, J. (1990). Sons, daughters, and intergenerational social support. *Journal of Marriage and Family*, *52*, 420–430.
- Stevens, N. (1995). Gender and adaptation to widowhood in later life. *Ageing & Society*, *15*, 37–58.
- Steverink, N. (2014). Successful development and aging: Theory and intervention. In N. Pachana & K. Laidlaw (Eds.), *Oxford handbook of geropsychology*. Oxford,

- England: Oxford University Press. Retrieved from http://nardisteverink.nl/articles/2014_Steuerink_Chapter_Successful_aging_Oxford%20handbook_in%20press.pdf
- Steuerink, N., & Lindenberg, S. (2006). Which social needs are important for subjective well-being? What happens to them with aging? *Psychology and Aging, 21*, 281–290.
- Steuerink, N., Lindenberg, S., & Ormel, J. (1998). Towards understanding successful ageing: Patterned change in resources and goals. *Ageing & Society, 18*, 441–467.
- Steuerink, N., Westerhof, G. J., Bode, C., & Dittmann-Kohli, F. (2001). The personal experience of aging, individual resources & subjective well-being. *Journals of Gerontology: Psychological Sciences, 56B*, 364–373.
- Umberson, D. (1992). Relationships between adult children and their parents: Psychological consequences for both generations. *Journal of Marriage and the Family, 54*, 664–674.
- Van Gaalen, R. I., & Dykstra, P. A. (2006). Solidarity and conflict between adult children and parents: A latent class analysis. *Journal of Marriage and the Family, 68*, 947–960.
- Van Tilburg, T. G. (1995). Delineation of the social network and differences in network size. In C. P. M. Knipscheer, J. De Jong Gierveld, T. G. Van Tilburg, & P. A. Dykstra (Eds.), *Living arrangements and social networks of older adults*. Amsterdam, The Netherlands: VU University Press.
- Victor, C. R., Scambler, S. J., Shah, S., Cook, D. G., Harris, T., & Rink, E. (2002). Has loneliness amongst older people increased? An investigation into variations between cohorts. *Ageing and Society, 22*, 585–597.
- Zhang, Z., & Hayward, M. D. (2001). Childlessness and the psychological well-being of older persons. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 56B*, S311.

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