

Social Contacts and Receipt of Help Among Older People in England: Are There Benefits of Having More Children?

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Objectives. To investigate whether number of children and, among parents, having a daughter is associated with older people's likelihood of at least weekly face-to-face social contact and later receipt of help if needed.

Method. Multivariate analysis of data from Waves 1 and 2 of the English Longitudinal Study of Ageing (ELSA).

Results. Older parents in England had higher chances of at least weekly face-to-face social contact than their childless counterparts but larger family size had only a slight additional effect. For parents, having at least one daughter was more important than number of children. Larger family size was positively associated with receipt of help from a child by parents with activities of daily living (ADL) or instrumental activities of daily living (IADL) limitations. Childless women were more likely than mothers to receive help from friends but even so had lower odds of receiving help from any informal source. Contact with a child in 2002 predicted receipt of help 2 years later.

Discussion. These results show some advantages for older parents compared with childless individuals in terms of social contact and receipt of help and, among parents, an additional effect of having a daughter. Changes in family size distributions have implications for the support of older people and for planners of formal services.

Key Words: Children—Older women and men—Receipt of help—Social contacts—England.

IN the U.K., as in many other populations, there were a number of significant changes in the family-building patterns of cohorts born in the 20th century. These included a trend toward increased concentration on family sizes of two children and a decline in the proportions of women having larger families of four or more children. The proportions never having children showed a U-shaped trend, first falling and then rising, with women born in the mid-century including the lowest proportions remaining childless (Chamberlain & Smallwood, 2004; Murphy, Martikainen, & Pennec, 2006). Reductions in mortality also mean that the proportions of children surviving to their parents' later life have increased substantially, although now that survival to midlife is almost universal, the potential impact of future changes in mortality is much lower (Murphy & Grundy, 2003).

Many previous studies of the implications of family size for the social support and well-being of older people have focused on comparisons between the childless and those with children. Past and possible future changes in family size distributions suggest that we also need to know about implications of changing numbers of children among those who are parents. Gender of children, particularly the availability of a daughter, is also potentially important and is associated with family size as the larger the family the greater the chance of having at least one daughter. In this article, we use data from the English Longitudinal Study of Ageing (ELSA) to analyze associations between number of living natural children, and in analyses of a subsample of parents, availability of a daughter, with two

indicators of social support for older people, frequent face-to-face contact and receipt of instrumental help, both of which may be regarded as indicators of intergenerational solidarity (Silverstein & Bengtson, 1997). We also investigate whether social contacts at one time point predict subsequent receipt of instrumental support as suggested in conceptual models, which view social contacts as an indicator of the social network from which social support, including instrumental help, may be drawn (Berkman, Glass, Brissette, & Seeman, 2000). A third important aim of the article is to investigate whether those with no or few children “compensate” through a greater propensity to meet and receive help from friends and relatives other than children.

Family and Social Support for Older People

Research has demonstrated that older people attach high priority to contacts with family and friends (Bowling et al., 2003) and that social contacts, and social support drawn from them, are positively associated with quality of life in older age groups (Bowling, 2005; Netuveli & Blane, 2008; Seeman, 2000). Adult children are an important element of the networks of older parents and numerous studies have shown frequent contacts and exchanges of support between them, although these vary in intensity between countries and by gender and socioeconomic status (Buber & Engelhardt, 2008; Furstenberg, 2005; Grundy & Shelton, 2001; Offer & Schneider, 2007; Silverstein, Cong, & Li,

2006; Zunzunegui, Béland, & Otero, 2001). This suggests disadvantages for the childless and greater advantages for parents of larger families. However, there may be some offsetting factors. First, among parents, there may be trade-offs between quantity of children and quality of parent-child relationships. There is evidence, for example, that children from larger families leave home earlier (Grundy, 1999) and that there is greater variation in the quality of parent-child relationships in larger families (Ward, Spitze, & Deane, 2009). Given the importance of reciprocity in intergenerational relationships (Kunemund & Rein, 1999; Grundy, 2005), it is possible that the greater resources parents of smaller families are able to provide for their children have some "payback" in the form of stronger ties with their adult children later in life (Henretta, Hill, Li, Soldo, & Wolf, 1997); if so, the association between number of children and indicators of support from children to older parents might not be linear. Second, in line with Cantor's hierarchical compensation model (Cantor & Brennan, 2000), older people with no or few children may "compensate" by developing stronger links with friends and other relatives. These wider ties are recognized as important influences on older people's well-being in their own right (Cornwell, 2011). Friendships, for example, enhance feelings of self-esteem, independence, and control and having wider-ranging networks enables older people to draw on a range of different types of support (Barefoot, Grønbaek, Jensen, Schnohr, & Prescott, 2005; Wellman & Wortley, 1990). Reliance on children to the exclusion of other contacts may thus have some negative effects on overall well-being. Analysis of data from the Americans' Changing Lives study undertaken by Fiori, Antonucci, & Cortina, (2006), for example, suggested that the absence of family in the context of friends was less detrimental for mental health than the absence of friends in the context of family.

Number of children and social contacts of older people.—A recent synthesis of studies from a range of high-income countries concluded that childless older people were more likely to have social networks with limited support potential than older parents (Dykstra & Hagestad, 2007). However, the implications of childlessness and the extent of "compensation" seem to vary by gender. Some studies have found that childless women (but not childless men) have more frequent contacts with friends than older mothers (Dykstra, 2006; Gray, 2009; Kendig, 1986; Wenger, Dykstra, Melkas, & Knipsheer, 2007; Wenger, Scott, & Patterson, 2000). Similarly, one study of older British and Italian people found that number of children was inversely associated with contacts with nonrelatives among older women, but not men (Tomassini, Glaser, & Stuchbury, 2007).

Fewer studies have considered effects of number of children on contact between older parents and their offspring, rather than just comparing the childless with parents. Some of these show that having more children is associated

with a greater chance of regular contact with at least one. Uhlenberg & Cooney (1990), for example, found that in a nationally representative sample of older U.S. women, those with four or more children had a higher chance of weekly face-to-face contact than mothers of one or two or three children. Similarly, Logan & Spitze's (1996) research based on a regional U.S. sample, reported a positive association between number of children and parents' contacts with at least one child. However, a more recent study of older families included in the U.S. National Survey of Families and Households found that having four or more children was associated with reduced contacts with children among retired women, although the opposite seemed the case for retired men (Szinovacz & Davey, 2001). Results from previous European research are also inconsistent. Tomassini et al. (2004) reported that Italian parents with three or more children had a greater chance of weekly face-to-face contact with at least one than parents of one or two children but found no such association in Finland. The British data included in this analysis showed a negative association between larger family size and contact with the *eldest* child (the only contact information collected) suggesting that larger family sizes are associated with less contact with *each* child. This is consistent with several studies from the perspective of the adult child, which have found that frequency of contact with parents is inversely associated with sibship size (Grundy & Shelton, 2001).

Children and receipt of help.—Many studies have found that having children is related to receipt of informal help (Carrière, Martel, Légaré, & Morin, 2006; Connidis & McMullin, 1999; Dykstra, 1993; Gironde, Lubben, & Atchison, 1999; Gray, 2009; Larsson & Silverstein, 2004). There is also some evidence that having more children is associated with a higher likelihood of receiving help from a child and lower receipt of help from formal care providers (Grundy, 2005; Hellström, Persson, & Hallberg, 2004), although in Logan & Spitze's (1996) study having more children was not associated with receiving more hours of help. Several studies have shown that parents have lower risks of admission to nursing and residential care facilities, although it is not clear whether having more than two children further reduces the risk (Hays, Pieper, & Purser, 2003; Grundy & Jitlal, 2007).

Contacts and provision of help.—Provision of most types of instrumental help to older people involves face-to-face contact, so parents' contact with children and contemporaneous receipt of help from them are by definition strongly associated. Apart from this association, theories of intergenerational relationships have posited that different dimensions of solidarity are associated with each other (Silverstein & Bengtson, 1997) and that people are able to draw different types of resources from their "convoys of support" as their needs change (Antonucci & Akiyama, 1987). It has thus

often been assumed that frequency of parent–child contacts at one time point will be associated with later provision of other types of support (Tomassini et al., 2004). However, very few studies have investigated whether contact at one time does indeed predict provision of help at another.

Gender of children.—Numerous studies have shown gender differences in patterns of social interaction. Women’s role as “kin keepers” may reflect their higher social needs and skills (see Kendig, Koyano, Asakawa, & Ando, 1999; Utz, Carr, Nesse, & Wortman, 2002) and gender role expectations about care taking and socializing may also explain why studies in North American and Northern European populations have often found that daughters provide more contact and social support to parents than sons (Bisschop et al., 2003; Grundy & Shelton, 2001; Kendig et al., 1999; Silverstein, Gans & Yang, 2006; Suito & Pillemer, 2006; Szinovacz & Davey, 2001). Differences in family size distributions may therefore have implications for intergenerational support over and above number of children because in smaller families the chance of having a daughter or daughters is lower.

Parental sociodemographic characteristics.—Parental gender and marital, socioeconomic, and health status may mediate, moderate, or confound associations between number of children and social contacts and intergenerational exchanges, especially as there are well-documented socioeconomic differences in family-building patterns. Spouses, and in some cases friends, may be more important sources of social support than children (Buber & Engelhardt, 2008; Dean, Kolody, & Wood, 1990) with children called upon to provide help to a much greater extent if a spouse is not available (Cantor & Brennan, 2000). As already noted, the implications of childlessness seem to vary by gender, and also by marital status, and these factors may interact. Never-married and divorced men in England are less likely to join organizations and clubs than married men (Perren, Arber, & Davidson, 2003), whereas other studies have found that never-married childless women are often more actively engaged in social networks, organizations, and voluntary work than their married counterparts with children (Cwikel, Gramotnev, & Lee, 2006). Many studies have reported that parental divorce is much more disruptive of intergenerational exchanges between adult children and their fathers than of those between children and their mothers (Furstenberg, Hoffman, & Shrestha, 1995; Grundy & Shelton, 2001; Tomassini et al., 2007).

There are also differences between socioeconomic groups in patterns of intergenerational exchange. Contacts with family are more frequent among less well-educated groups, partly associated with greater geographical proximity, (see Gray, 2009; Grundy & Murphy, 2006; Grundy & Shelton, 2001) and the less well educated are more likely to name family members as their closest friends (Pahl &

Pevalin, 2005) and have social networks including a larger proportion of relatives (Gray, 2009).

Associations between social contacts and health are also known to be important. Social engagement and support are generally accepted to have health protective effects (Seeman, 2000) but are also influenced by health status. On the one hand, health limitations may restrict opportunities for social interaction, on the other, children, other relatives, and friends may increase provision of support in response to an older person’s poor or deteriorating health (Avlund, Lund, Holstein & Due, 2004).

Some of these differences in results from previous studies may reflect variations in measures used. For example, whereas some studies have treated number of children as a continuous variable (Hays et al., 2003; Tomassini et al., 2007), others have grouped number of children into categories in slightly different ways (Szinovacz & Davey, 2001; Tomassini et al., 2004). Additionally, some studies consider only women and many consider number of children undifferentiated by gender. There are also differences between studies in the extent to which they control for characteristics such as marital, socioeconomic, and health status, which are known to be associated with variations in intergenerational contacts and exchanges. Finally, variations in time periods and populations studied may be relevant.

RESEARCH QUESTIONS

The central question motivating the research reported here is whether having more children, and for parents having a daughter, brings advantages to older people in the form of a greater chance of frequent face-to-face contact and greater chance of receiving instrumental help if needed. Older people with no or few children may “compensate” though contact and receipt of help from friends and other relatives so, in order to answer this question, we need to consider these sources of support (which are themselves important), as well as support from children.

We first test the hypothesis that number of children is positively associated with face-to-face contact and analyze associations between number of children and at least weekly face-to-face contact with relatives other than children; friends; and a combined grouping of relatives (other than children), friends, or children. On the basis of previous research, we expected that parents would have a higher chance of overall contact than the childless and that this differential would be greater for men because women with no or few children would be more likely than men to “compensate” through contact with friends or other relatives.

Our second related research question is whether, among parents, having at least one daughter, as well as number of children, is positively associated with frequent face-to-face contact with a child. On the basis of previous studies, we expected that having a daughter would be positively associated with frequent contact, particularly for mothers.

In the second part of the analysis, we investigate receipt of instrumental help in the second wave of the data set among people who then had one or more limitations in instrumental activities of daily living (IADLs) or activities of daily living (ADLs). In this part of the analysis, we adopt a longitudinal approach and examine associations between number of children and weekly social contacts at baseline with subsequent receipt of help. In analyses restricted to parents, we additionally examine associations between number of children, presence of a daughter, and receipt of help specifically from a child. Use of data from two waves of survey to examine receipt of help has some disadvantages in terms of sample attrition between Waves 1 and 2. However, the value of a longitudinal approach is that it enables us to test whether social contacts at one time point predict subsequent receipt of help. This is important to assess the extent to which these different dimensions of social support are associated with each other, as theory would suggest. As already discussed, provision of instrumental help nearly always involves face-to-face contact, so this issue cannot be addressed satisfactorily using a cross-sectional approach.

All analyses were undertaken separately for men and women because of the large number of studies which indicate that children's relationships with parents vary by gender of the parent, as well as by gender of the child (Lawson, Silverstein, & Bengtson, 1994) and known gender differences in the social networks of childless men and women (Dykstra, 2006). We control for respondents' marital, socioeconomic, and health status because of evidence from the literature that all of these are associated with variations in patterns of intergenerational exchange, as well as with differences in family size.

METHOD

Data

We use data from the first and second waves of the ELSA, a nationally representative longitudinal study of the older population of England (Banks, Breeze, Lessof, & Nazroo, 2006; Marmot, Banks, Blundell, Lessof, & Nazroo, 2003). The first wave of ELSA conducted in 2002–2003 included men and women then aged 50 years or older from households that had participated in any one of the 1998, 1999, or 2001 rounds of the cross-sectional Health Survey for England (HSE). Response rates for the HSE were 69% in 1998, 70% in 1999, and 67% in 2001. This process led to the recruitment of 11,392 core members to the first wave of the ELSA study (response rate 67%). About 10,770 of these were eligible for reinterview at Wave 2 in 2004–2005 (excluding those who had died or had moved out of the country) of whom 8,780 (82%) participated. Comparisons with other sources, including the national census, showed that the baseline ELSA survey was nationally representative (Marmot et al., 2003) and comparisons with the national General Household Survey showed similar distributions

by receipt of help from children (Pickard, 2008). Previous investigations of the characteristics of those dropping out of the study indicate that among 55–64 year olds, but not older age groups, lower levels of education were associated with greater study drop out (Banks, Muriel, & Smith, 2011).

Here, we include men and women aged 60 and older in Wave 1 who had complete data on number and gender of children and socioeconomic, marital status, health, and social contacts items in that wave. Analyses of variations in receipt of help at Wave 2 are necessarily restricted to those still in the study and exclude 5% who had died, 1% who moved abroad or to an institution, 13% who refused, and 2% who could not be traced. Nonrespondents at Wave 2 were more disadvantaged than those retained in the study having lower levels of education and wealth and higher levels of poor health and disability. Nonrespondents also included slightly higher proportions of those who had had weekly contact with children in the first wave of the survey. In both waves, about 3% of cases were excluded due to missing information on one or more variables used in the analysis.

Measures at Wave 1

Social contacts.—The self-completion section of the survey included questions that asked “How often do you meet up with any of your children/other members of your immediate family/friends on average?” Response codes were 3 or more times a week; once or twice a week; once or twice a month; every few months; once or twice a year; less than once or twice a year or never. Prior sift questions asked whether respondents had any children; any other family members (“for example, brothers, sisters, parents, cousins or grandchildren”), or any friends. We created three dichotomous items indicating whether respondents had at least weekly (3 or more times a week or once or twice a week) face-to-face contact with relatives other than children; friends; and a combined grouping of relatives, friends, or children (1 = yes, 0 = no). Those reporting no friends or no family members were coded 0 in relevant analyses. In analyses restricted to parents, weekly face-to-face contact with one or more children was coded in the same way. Missing items were coded 0 if the individual had answered at least one other contact item.

Number of children and demographic characteristics.—Respondents were asked about number and gender of living natural children, including those co-resident and those living elsewhere. We derived five binary variables indicating 0, 1, 2, 3, or 4+ natural living children and a further dichotomous variable for parents indicating whether the respondent had any daughters (1 = one or more daughters, 0 = no daughters). Marital status was coded into categories indicating married, never married, divorced/separated, and widowed. In the analyses of parents, marital status was dichotomized (married vs not married) due to small numbers in some subgroups.

Socioeconomic status.—Wealth quintiles were calculated using nonpension wealth indicating financial, physical, and housing wealth net of debts. This measure provides a better estimate of economic status in older people than measures of income (Banks et al., 2006). Tenure status was measured by a dichotomous variable (1 = not homeowner, 0 = homeowner). The non-homeowner category, most of whom were tenants of housing provided by local authorities or housing associations, was not further disaggregated after preliminary analyses showed few differences in associations between public and private sector tenants. Education was measured with a categorical variable distinguishing respondents whose highest qualification was equivalent to or higher than A' level (exams taken at around age 18—roughly equivalent to the level of a U.S. high-school diploma); General Certificate of Secondary Education (GCSE) level (exams taken around age 15–16), or below this level.

Health status.—Health and physical functioning were measured using four dichotomized items based on self-reported general health (1 = bad/fair, 0 = good); limiting long-term illness (1 = one or more, 0 = none); limitation in ADLs, such as dressing and walking across a room (1 = one or more, 0 = none), and limitations in IADLs, such as shopping and making a phone call (1 = one or more, 0 = none). Compared with previous studies, the ADL and IADL scales used in this study included a broader range of items (Marmot et al., 2003). We chose to dichotomize the IADL and ADL limitation items as the proportions with several limitations were small and the distribution highly skewed.

Wave 2 Variables

Receipt of help.—For those who reported needing help with ADLs or IADLs at Wave 2, dichotomous measures of help received from relatives; friends; and a combined grouping of relatives, friends, or children (1 = yes, 0 = no) were derived together with an indicator of help from children used in the analysis of the parent subsample. These measures were based on a question which asked “Thinking about the activities that you have problems with, does anyone ever help you with these activities (including your partner or other people in your household)?” A further question asked for the source of help.

STATISTICAL ANALYSIS

Variations in At Least Weekly Face-to-Face Contact

Logistic regression was used to analyze variations in the proportions with weekly face-to-face contact and receipt of help using the Mplus software (Muthén & Muthén, 2007). We first present analyses of the social contact outcomes at Wave 1 for the whole sample. Results from two models are presented; Model 1 included respondent's age (in single years) and number of children. Model 2 additionally included socioeconomic variables (wealth, tenure status, and

educational level), indicators of health status (self-reported poor general health, long-term illness, and IADL and ADL limitations), and marital status. In preliminary analyses, we entered these groups of variables in blocks but, as coefficients for particular variables were very similar in these intermediate models and the final fully adjusted one, we do not present these results here.

Analysis of the parent subsample.—We next investigated the effect of having a daughter in models, which by definition were restricted to parents. Here, we fitted three models. Model 1a was equivalent to Model 1 in the whole-sample analysis and included age and number of children (here ranging from 1–4+); Model 1b added a dichotomous indicator of daughter/no daughter; and Model 2a additionally included the sociodemographic, health, and marital status variables described previously.

Variations in Receipt of Help

Models of help received at Wave 2 were restricted to those likely to need help defined as then having at least one IADL or ADL limitation and followed a similar structure to those fitted to the social contact variables. However, as one of our research questions was whether social contacts at baseline were a good predictor of later receipt of help, these analyses included an additional step. In the analysis of the sample including the childless, this added two dichotomous variables indicating at least weekly contact with friends (0 = no, 1 = yes), and the equivalent for contact with relatives, at baseline. In the analysis restricted to parents, the baseline contact variable related to contact with children. We fitted models in steps equivalent to the modeling of variations in social contacts; in the interests of space, we present only results from the final models and comment briefly on any notable differences in intermediate models. Also for space reasons, we have not included confidence intervals (CI) in the tables, but these are available on request.

All models were run with and without cross-sectional and longitudinal weights to check whether nonresponse and attrition affected the results. Details of the derivation of these weights have been reported elsewhere (Taylor et al., 2007). In brief, weights were calculated after an analysis of nonresponse in both the HSE and ELSA and a further round of weighting undertaken to poststratify the responding sample to the adult population aged 50 and older resident in England as represented by the 2001 Census. For simplicity, we here present results from the unweighted analysis as these were very similar to results using weighting.

RESULTS

Descriptive Results

Table 1 shows characteristics of the sample at baseline in 2002–2003 and information on proportions with ADL and IADL limitations and receipt of help at Wave 2 in

Table 1. Distributions of Variables Used in the Analysis: Women and Men Aged 60 and Older At Wave 1 (2002–2003) and Wave 2 (2004) of the English Longitudinal Study of Ageing (ELSA)

	Men (<i>n</i> = 3,176)	Women (<i>n</i> = 3,835)
Wave 1		
Age in years, range 60–91, <i>M</i> (<i>SD</i>)	70.7 (7.5)	71.2 (7.8)
No of children (%)		
0	15.5	15.9
1	16.7	17.0
2	36.1	34.0
3	18.3	19.4
4+	13.4	13.7
At least one daughter ^a (%)	75.3	75.2
Marital status (%)		
Married	74.2	51.3
Never married	5.4	5.1
Divorced/separated	6.7	8.5
Widowed	13.7	35.1
At least weekly face-to-face contact with: (%)		
Child/children ^a	50.1	54.3
Other relatives	24.3	29.5
Friends	45.0	51.1
Wealth quintile (%)		
1 (highest)	22.8	17.5
2	20.6	19.6
3	20.7	21.4
4	20.5	24.3
5 (lowest)	15.5	17.2
Not home owner (%)	21.1	24.4
Education (%)		
A level +	27.9	17.3
GCSE level	27.6	26.4
No qualification	44.5	56.4
Poor general health (%)	35.9	34.7
Limiting long-term illness (%)	39.2	39.2
ADL limitation (%)	24.1	26.3
IADL limitation (%)	21.4	29.2
Wave 2	(<i>n</i> = 2,418) ^c	(<i>n</i> = 3,023) ^c
ADL limitation (%)	24.2	27.7
IADL limitation (%)	23.0	32.4
Received help from children ^{a,b} (%)	23.9	40.5
Received help from other relatives ^b (%)	10.1	19.1
Received help from friends ^b (%)	6.0	10.9
Received help from children/other relatives and/ or friends ^b (%)	28.7	45.7

Notes. ADL = activities of daily living; IADL = instrumental activities of daily living.

^aAmong those who had children.

^bAmong those who reported limitation in ADLs or IADLs.

^c*n* of all people who responded to ADL/IADL questions, of these 781 men (662 fathers) and 1,211 women (1,012 mothers) had ADL or IADL limitation.

2004. At baseline, 16% of sample members were childless, 52% had one or two children, and 32% had three or more children; three-quarters of parents had one or more daughters. About 30% of women and 24% of men saw relatives other than children at least weekly and 51% of women and 45% of men had weekly face-to-face contact with friends. About half the parents in the study saw one or more of their children at least once a week. As would be expected for these cohorts and age groups, men had higher levels of education than women, included a much higher proportion

who were still married, and a lower proportion with an ADL or IADL limitation. At Wave 2, among parents with ADL or IADL limitations, the proportions receiving help from a child was much higher among mothers (41%) than fathers (24%).

Face-to-Face Contacts

Tables 2 and 3 show, for men and women, respectively, results from logistic regression models of variations in the proportion of older adults with at least weekly face-to-face contact with relatives (other than children); friends; and the combined category of relatives, friends, or children. Men with three children and women with either three or four or more children were significantly more likely than their childless counterparts to have weekly face-to-face contact with a relative (other than a child). Women with three children were less likely than childless women to see friends at least weekly; other differences in this indicator by number of children were not statistically significant. For both men and women, parents were more likely than the childless to have at least weekly contact with anyone from the combined relatives/friends/children grouping. Among men, odds of such contact were highest for fathers of three children but CI (not shown) overlapped with those for fathers of two or four or more children. For women, there were no variations according to number of children, the notable difference being between mothers and the childless. There was no indication of a stronger association between number of children and contacts for men than for women.

Differences by other characteristics showed that, compared with married respondents, widows and widowers had higher odds of weekly contact with relatives but for divorced women odds of contact with relatives were lower than for married women. Widowed and divorced men and widowers had higher odds of contact with friends. Women and men with higher levels of education were less likely to have weekly contact with relatives. Men in the fourth quintile (second lowest) of the wealth distribution had the highest odds of contact with relatives, and of overall social contact, but there were no associations between wealth and social contacts among women. Among women, IADL limitation and long-term illness were associated with lower contacts with friends and the combined relatives/friends/children category suggesting that health limitations may restrict social activities.

Face-to-face contacts between parents and children.—For those who were parents, we investigated the effects of having at least one daughter, as well as number of children. Results (Table 4) showed that fathers with three children had higher odds of weekly face-to-face contact with a child than fathers of one child. For mothers, having more than one child was positively associated with contact when only respondents' age and number of children were included in the model (Model

Table 2. Associations (Odds Ratios [OR]) Between Number of Living Children and At Least Weekly Face-to-Face Contact With Relatives, Friends, and Children/Relatives/Friends Among Older Men (60 and Older) in England, 2002 ($n = 3,176$)

	Weekly contact with					
	Relatives ^a		Friends		Children/relatives or friends	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	0.99	0.98**	0.98***	0.97***	0.98***	0.97***
No of children (ref = 0)						
1	1.36*	1.34	1.04	1.02	1.72***	1.70***
2	1.19	1.30	0.89	0.90	1.69***	1.69***
3	1.61**	1.73**	0.87	0.88	2.08***	2.08***
4+	1.28	1.37	0.80	0.85	1.54**	1.60***
Marital status (ref = Married)						
Never married	—	1.01	—	1.16	—	1.04
Divorced	—	0.70	—	1.34*	—	0.80
Widowed	—	1.36*	—	1.71***	—	1.26
Wealth quintile (ref = 1, highest)						
2	—	1.13	—	1.05	—	0.95
3	—	1.30	—	1.00	—	1.06
4	—	1.49**	—	1.13	—	1.39*
5 (lowest)	—	1.03	—	0.85	—	0.97
Not home owner	—	0.99	—	0.85	—	0.82
Education (ref = No qualification)						
A levels +	—	0.48***	—	1.05	—	0.83
GCSE level	—	0.77**	—	0.97	—	0.99
Poor general health	—	1.07	—	0.85	—	1.01
Long-term illness	—	0.97	—	0.92	—	0.97
ADL limitation	—	0.93	—	1.02	—	1.06
IADL limitation	—	0.88	—	0.97	—	0.83

Notes. ADL = activities of daily living; IADL = instrumental activities of daily living.

^aOther than children.

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

Table 3. Associations (Odds Ratios [OR]) Between Number of Living Children and At Least Weekly Face-to-Face Contact With Relatives, Friends, and Children/Relatives/Friends Among Older Women (60 and Older) in England, 2002 ($n = 3,835$)

	Weekly contact with					
	Relatives ^a		Friends		Children/relatives or friends	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	0.98***	0.97***	0.98***	0.98***	0.97***	0.96***
No of children (ref = 0)						
1	1.33*	1.23	0.93	0.95	1.74***	1.74**
2	1.27*	1.22	0.86	0.91	1.70***	1.74***
3	1.41**	1.33*	0.76*	0.79*	1.85***	1.89***
4+	1.64***	1.52**	0.81	0.89	1.75***	1.91***
Marital status (ref = Married)						
Never married	—	0.90	—	1.35	—	1.21
Divorced	—	0.69**	—	1.10	—	0.90
Widowed	—	1.09	—	1.90***	—	2.58***
Wealth quintile (ref = 1, highest)						
2	—	1.05	—	1.08	—	1.05
3	—	1.25	—	1.11	—	1.23
4	—	1.17	—	1.06	—	1.19
5 (lowest)	—	0.95	—	0.89	—	0.84
Not home owner	—	1.17	—	1.04	—	0.95
Education (ref = No qualification)						
A levels +	—	0.57***	—	1.18	—	0.82
GCSE level	—	0.73***	—	0.98	—	0.97
Poor general health	—	0.95	—	0.94	—	1.00
Long-term illness	—	0.99	—	0.82*	—	0.82*
ADL limitation	—	1.06	—	1.05	—	1.04
IADL limitation	—	0.85	—	0.73**	—	0.72**

Notes. ADL = activities of daily living; IADL = instrumental activities of daily living.

^aOther than children.

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

Table 4. Associations (Odds Ratios [OR]) Between Number of Children and Availability of a Daughter and At Least Weekly Face-to-Face Contact With a Child Among Older Parents (60 and Older) in England, 2002

	Fathers (<i>n</i> = 2,683)			Mothers (<i>n</i> = 3,226)		
	Model 1a	Model 1b	Model 2a	Model 1a	Model 1b	Model 2a
Age	0.98***	0.98***	0.98***	0.98***	0.98***	0.98***
No of children (ref = 1)						
2	1.15	1.00	1.01	1.22*	1.07	1.08
3	1.63***	1.37*	1.40**	1.51***	1.22	1.23
4+	1.20	0.97	0.97	1.54***	1.22	1.21
Daughter	—	1.66***	1.71***	—	1.71***	1.76***
Married	—	—	1.24	—	—	1.06
Wealth quintile (ref = 1, highest)						
2	—	—	0.90	—	—	1.19
3	—	—	1.22	—	—	1.60***
4	—	—	1.61***	—	—	1.67***
5 (lowest)	—	—	0.99	—	—	1.26
Not home owner	—	—	0.84	—	—	0.94
Education (ref = No qualification)						
A level +	—	—	0.62***	—	—	0.52***
GCSE level	—	—	0.97	—	—	0.87***
Poor general health	—	—	1.12	—	—	0.90
Long-term illness	—	—	0.99	—	—	0.93
ADL limitation	—	—	1.01	—	—	1.16
IADL limitation	—	—	0.93	—	—	0.87

Notes. ADL = activities of daily living; IADL = instrumental activities of daily living.

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

1a), but this association ceased to be significant once the variable relating to having a daughter was added (Model 1b). For both mothers and fathers having a daughter was positively associated with contact, including in the final model, which was adjusted for respondents' sociodemographic and health characteristics. Associations between socioeconomic status and contact were similar to those in the whole sample except that among mothers mid to low wealth (quintiles 3–4) was positively associated with at least weekly face-to-face contact with a child. There were no significant associations between contact with a child and the indicators of health status.

We also investigated effects of having a daughter on contacts with relatives and friends. Results (not shown but available on request) showed that among mothers, having one or more daughters was positively associated with higher odds of weekly face-to-face contacts with other relatives but not with contacts with friends.

Receipt of Help Among Those With IADL or ADL Limitations at Wave 2

For those needing help with one or more IADLs or ADLs in the second wave of the study, we investigated receipt of help from relatives; friends, or anyone from the combined category of children, relatives, and friends. This analysis thus parallels the analysis of variations in contact at Wave 1 except that we included additional variables indicating whether respondents had had at least weekly face-to-face contact with relatives or friends respectively in Wave 1.

Table 5 shows that odds of receipt of help from any or all of children, other relatives or friends was higher among

mothers of one, three, or more children compared with childless women such that women with four or more children were more than 3 times as likely to receive help than their childless counterparts. For mothers of two children, the odds ratio (OR) was also raised but failed to reach conventional indicators of statistical significance (OR: 2.03, 95% CI: 0.98–2.40). There was some evidence of “compensation” in that women with two or more children were less likely to receive help from friends than childless women. Moreover, in line with results from other studies, we found that widowed and divorced women were more likely to receive help from relatives, friends, and help from any of the sources considered than women with a spouse available.

Among men, marital status was also associated with receipt of help. Widowers were more likely than married men to receive help from relatives and had higher odds of receipt of help overall. Never-married and divorced men had higher odds of receipt of help from friends than married men. Fathers of four or more children were less likely to have help from friends than childless men but otherwise receipt of help among men did not vary significantly by number of children.

Receipt of any help was positively associated with poor general health, having a long-term illness, and with lower levels of wealth for both men and women. Among men, weekly contact with friends at Wave 1 was positively associated with help from friends at Wave 2; for women, this association was not significant but contact with relatives at baseline was associated with help from them in Wave 2.

Table 5. Associations (Odds Ratios [OR]) Between Number of Children and Weekly Social Contacts at Wave 1 With Help Received From Relatives, Friends, and Children/Relatives or Friends at Wave 2; Older People With an IADL or ADL Limitation at Wave 2

	Men (<i>n</i> = 781)			Women (<i>n</i> = 1,212)		
	Relatives ^a	Friends	Children/relatives or friends	Relatives ^a	Friends	Children/relatives or friends
Age	1.06***	1.06**	1.06***	1.01	1.04**	1.04***
No of children (ref = 0)						
1	0.37	0.62	1.36	1.35	0.81	2.03**
2	0.56	0.56	1.41	0.79	0.31***	1.53
3	0.69	0.59	1.65	1.29	0.23***	2.54***
4+	0.76	0.15*	1.66	1.19	0.27***	3.15***
Marital status (ref = Married)						
Never-married	0.82	3.82*	1.62	1.81	1.29	1.89
Divorced	0.57	5.45**	1.20	2.99***	3.86***	2.42**
Widowed	2.08*	2.02	3.57***	3.29***	1.81*	3.37***
Wealth quintile (ref = 1, highest)						
2	3.54*	0.66	2.68**	1.18	0.75	0.93
3	2.58	1.99	2.41*	1.61	1.46	1.39
4	2.74	0.74	2.01	1.63	1.62	1.64*
5 (lowest)	4.38*	0.76	3.40**	1.69	1.61	2.03**
Not home owner	1.44	0.85	1.37	1.26	0.83	1.17
Education (ref = No qualification)						
A levels +	1.13	1.67	0.78	0.86	2.52**	0.96
GCSE level	0.77	0.73	0.74	0.79	1.15	0.70*
Poor general health	1.91*	2.31*	1.55*	1.11	1.20	1.76***
Long-term illness	1.41	1.52	2.21***	2.11***	2.43***	1.87***
Weekly contact with relatives	1.42	0.68	1.23	1.93***	1.05	1.11
Weekly contact with friends	0.97	2.50**	1.05	0.85	1.29	0.89

Notes. ADL = activities of daily living; IADL = instrumental activities of daily living.

^aOther than children.

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

Table 6. Associations (Odds Ratios [OR]) Between Number of Children, Availability of a Daughter and Contact With Children at Wave 1 With Help Received From Children at Wave 2; Older Parents With an IADL or ADL Limitation at Wave 2

	Fathers (<i>n</i> = 646)				Mothers (<i>n</i> = 991)			
	Model 1a	Model 1b	Model 2a	Model 3a	Model 1a	Model 1b	Model 2a	Model 3a
Age	1.07***	1.07***	1.07***	1.08***	1.07***	1.07***	1.05**	1.06***
No of children (ref = 1)								
2	1.14	1.09	1.37	1.36	0.96	0.84	0.98	0.96
3	1.33	1.40	1.55	1.52	1.44	1.19	1.39	1.33
4+	1.69	1.81	1.70	1.69	2.94***	2.39***	2.15**	2.12**
Daughter	—	0.51	0.83	0.74	—	1.53*	1.56*	1.43
Married	—	—	0.40***	0.40***	—	—	0.45***	0.44***
Wealth quintile (ref = 1, highest)								
2	—	—	2.33	2.38*	—	—	1.05	1.02
3	—	—	2.55*	2.53*	—	—	1.50	1.34
4	—	—	2.29	2.28*	—	—	1.78*	1.66
5 (lowest)	—	—	3.26**	3.37**	—	—	1.93*	1.81
Not home owner	—	—	1.27	1.32	—	—	1.14	1.14
Education (ref = No qualification)								
A levels +	—	—	0.75	0.79	—	—	0.67	0.70
GCSE level	—	—	0.87	0.87	—	—	0.61**	0.59**
Poor general health	—	—	1.33	1.32	—	—	1.81***	1.87***
Long-term illness	—	—	2.82***	2.76***	—	—	1.63**	1.67**
Weekly contact with child	—	—	—	1.74**	—	—	—	1.73***

Notes. ADL = activities of daily living; IADL = instrumental activities of daily living.

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

Parents' receipt of help from children.—We conducted a similar analysis in the parent subsample in which we included the variable indicating presence of a daughter

(Table 6). Having four or more children compared with one child was positively associated with mothers' receipt of help from a child. In the smaller sample of fathers, odds of

receiving help from a child tended to increase with number of children but not significantly so. Having a daughter was not significantly associated with receipt of help from a child in the final models presented, although for women, there was a significant association between having a daughter and receipt of help from a child in the model in which baseline contact with children was not included.

As in the whole sample, being married was negatively, and poor health or having a long-term illness was positively, associated with receipt of help from children. Weekly contact with children in Wave 1 was associated with mothers' and fathers' receipt of help from children in Wave 2. This association remained after controlling for number of children; having one or more daughters; and socioeconomic, marital, and health status.

DISCUSSION

Most previous studies have compared social contacts among childless older people and older parents. Where number of children has been considered, it has often been treated as a continuous measure that has not taken into account possible nonlinear effects, which could arise if, for example, there were trade-offs between number of children and quality of relationships or children's feelings of obligations to parents. In this article, we use number of children as a categorical variable in order to address this issue. We also considered associations between number of children and social contacts more generally in order to investigate the extent to which older people with no or few children "compensate" through more contact with friends or other relatives. The results show that, compared with the childless, parents had a higher chance of any weekly face-to-face social contact (with children, relatives other than children, or friends) including, in some cases, a higher chance of contact with relatives—a category that includes relatives acquired through parenthood, such as grandchildren and sons and daughters-in-law. Odds of contact tended to be slightly higher for those with three or four or more children than for those with one or two but differences by number of children were in most cases not significant. There was some indication of a possible nonlinear association for men in that odds of contact were highest for those with three children, but the differences between men with three children and men with two or four or more children were not statistically significant. We found slight indications of inverse associations between number of children and face-to-face contact with friends, but these were generally not statistically significant. Tomassini et al. (2007) reported a significant negative association between number of children and contacts with nonkin friends among women (but not men) in the U.K. and Italy; the difference in results may reflect the fact that number of children was treated as a continuous variable in that study and as a categorical one here and differences in the definitions used. For example, the

measure of contact in the U.K. data used by Tomassini referred to any kind of contact, including by telephone and mail, and the Italian measure to face-to-face contact with friends who were regarded as potential confidants in times of difficulty—a more restrictive definition that that employed here. However, given that our results were in a similar direction, it may be that the samples we use were too small to identify this association.

Our results support our first hypothesis of an association between parenthood and social contact overall. They also suggest that this association does not increase linearly with number of children, a possible exception being the positive association between number of children and contact with relatives. We did not find support for a weaker association among women than men, although as our analyses were stratified by gender this was not formally tested.

Our further investigation of contacts with children in a subsample of parents also suggested that having *more* children does not confer additional advantages over having *any* children in terms of social contacts, however, having a daughter did. As expected, older women and men who had one or more living daughters were more likely to have weekly face-to-face contacts with at least one child. These results are congruent with previous studies that have found that daughters on average have more contacts with their parents than sons. In further analyses (not presented), we also found that having a daughter increased the likelihood of mothers' weekly contacts with other relatives. This may reflect the fact that women are more likely to bridge between groups (Cornwell, 2011). Our results were consistent with previous findings in indicating that more frequent contacts with children and relatives were related to lower educational level and to some extent lower economic status (Gray, 2009; Grundy & Murphy, 2006).

The analysis of receipt of help among men and women with IADL or ADL limitations showed significant differences between parents and the childless in the probability of receiving help, and some indications of a gradient with more children for women, but not men. Among parents, mothers of four or more children were more likely to receive help from a child than mothers who had only one child. In contrast to our expectations, having a daughter was not associated with receipt of help from a child, although for women there was a significant association when contact with a child in Wave 1 of the survey was not included in the model. This suggests that the association between having a daughter and receiving help is mediated by earlier weekly contact, rather than that gender of child is not related to receipt of help. This needs further investigation in other data sets.

As hypothesized, contact with children in Wave 1 of the survey was predictive of receipt of help from a child in Wave 2, and this association turned out to be highly robust: it was independent of number of children, having a daughter,

marital, socioeconomic, and health status. This suggests that information on contacts with children is a useful indicator of future probability of receiving help if needed and can sensibly be used for planning purposes.

Associations with socioeconomic variables were generally as expected from the literature and show that parents with lower levels of education and wealth were more likely to have frequent contact with children and receive help from them than parents from more socioeconomically advantaged groups. For women, poorer health at baseline was associated with a lower chance of frequent contact, and for both women and men, poorer health was associated with a greater chance of receiving help at Wave 2. These results may reflect two processes, the negative effects of poor health on opportunities for social engagement and the tendency for children and others to respond to older people's health-related needs for assistance.

This study has some limitations. First, although the data are drawn from a nationally representative study of the older population of England, initial nonresponse and attrition between the two waves we consider may have led to some bias in our estimates. Those who died or dropped out differed to some extent from those remaining in the study. Apart from this possible bias, the relatively small numbers included in some groups, particularly of men at Wave 2, restricted the statistical power of the analyses and we may have failed to detect some differences, which would be revealed in analysis of a larger sample. Despite these limitations, the results highlight the advantage of frequent contacts with children and higher-order parity in terms of later receipt of help from children but suggest that having more children does not add many benefits in terms of contacts when socioeconomic and marital status are taken into account. Among men, we found some suggestion that those with three, rather than four or more children, had the greatest chance of frequent social contact, but this would need examination in larger sample. Availability of a daughter promotes social contacts but mostly only among older mothers. Methodologically, our results demonstrate the importance of considering gender of children when considering possible effects of family size given that the two are associated with each other.

Changes in the family-building patterns of cohorts who will reach older ages in the 21st century thus have some implications for the support of the older population; particularly as smaller family size distributions imply a larger proportion of older people who will not have a daughter. However, the main differences we found were between the childless and those with children, and our results also show the importance of other factors for social contact and support, particularly presence of a spouse but also socioeconomic status.

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