Adolescent grandchildren's perceptions of grandparents' involvement in UK: an interpretation from life course and evolutionary theory perspective

Mirkka Danielsbacka · Antti O. Tanskanen

Published online: 17 July 2012
© Springer-Verlag 2012

Abstract In this article, we study grandparental involvement from the viewpoint of evolutionary theory and sociological life course perception. We have used 'the Involved Grandparenting and Child Well-Being 2007' survey, which is the first nationally representative sample of British and Welsh adolescents aged 11–16 ($n = 1,488$). First, we explore with the descriptive statistics the amount of grandparental involvement reported by adolescents. The result follows the predicted pattern: maternal grandparent is reported to involve in a grandchild's life the most, second maternal grandfather, third paternal grandmother and the last paternal grandfather. Second, we focus more closely on separate grandparents and show with four linear regression models which factors are connected to each grandparent's involvement. Grandchild's age, grandparent's health, grandparent's labour force participation and distance between a grandparent and a grandchild were factors that have similar effects in relation to all grandparents. Marital status mattered only for grandfathers, whereas family structure of a grandchild has opposite effects in relation to maternal and paternal grandparents. Grandchild's sex, grandparent's age, the number of grandchildren and the number of living grandparents all mattered, but only with respect to some grandparents. The study shows that it is advantageous to merge sociological and evolutionary viewpoints when studying a grandparental involvement in a modern society.

Keywords Grandparents · Grandchildren · Grandparental involvement · Intergenerational relationships · Evolutionary theory · Life course perception

Introduction

Owing to the demographic changes, especially the extended life expectancies, a grandparent–grandchild relationship has become an important issue in modern societies. Grandparental involvement has gained interest foremost from sociological and evolutionary researchers. There is now a growing body of studies about grandparenting from these disciplines. However, a salient division prevails between sociological and evolutionary studies about grandparenting. The division is most visible in the minor amount of references these two disciplines make to each other (Coall and Hertwig 2010, 2011).

To fully understand different aspects of grandparenting we need to combine these approaches and start studying grandparental involvement on multiple levels. Therefore, we suggest in this article one potential way of merging evolutionary theory and sociological life course theory.

In general evolutionary theory seeks the fundamental reasons for caring grandparenting. The idea that there is some basic core in grandparenting gains strong support from the analyses and reviews concerning pre-modern, traditional and contemporary human societies (Sear and Mace 2008; Coall and Hertwig 2010; Sear and Coall 2011) and the fact that the researchers have found occurrence of caring grandmothering for example in many primates furthermore highlights the possibility of the evolutionary value of caring grandparenting (Euler 2011).

The main explanatory power of evolutionary approach is that it seeks to explain coherently what motivates

Responsible Editor: H.-W. Wahl.

M. Danielsbacka (✉) · A. O. Tanskanen
Department of Social Research, University of Helsinki,
P.O. Box 18, 00014 Helsinki, Finland
e-mail: mirkka.danielsbacka@helsinki.fi

grandparents to lend a hand and for what reasons the positive emotions towards close kin develop. The main theoretical premises are Hamilton's (1964) kin selection theory and Trivers' (1972) parental investment theory. Kin selection theory predicts that the closer the actual kin relationship is (i.e., the closer people have reason to believe they are genetically related) the more people will provide altruistic help. By helping genetically related kin, especially in descending line, it is possible to enhance one's inclusive fitness. Parental investment theory takes into account all investments parents make in their offspring and it also acknowledges the difference between sexes in the amount of the investment (i.e. female have higher obligatory investment into each single reproduction). Parental investment can be easily extended to grandparental investment. Hence, grandparental attachment as well as parental attachment has clear biological roots.

In spite of the emotional continuities, grandparenting has changed over the years. One evident change is the shift from high-fertility and -mortality societies to low-fertility and -mortality societies which has created a new setting for caring grandparenting (Coall and Hertwig 2011). Nowadays in industrialized societies grandparents are not needed to contribute on a child survival as before (see, e.g. Lahdenperä et al. 2004) but at the same time the grandparents themselves are in better health and in better economical situation than never before. In addition, the geographical mobility of people and the growing number of divorces separates grandparents and grandchildren both physically and mentally. Women's labour market participation and the public day care system, which was partly created to enable working mothers, on the one hand decrease and on the other hand increase the need for the help from grandparents (see Hank and Buber 2009). In human's grandparental attachment and caring grandparenting is thus a universally found psychological disposition (Hrdy 2009) but it does not take place in a vacuum.

Therefore, we need to take into account the proximate causes that might promote or lessen grandparental involvement in modern societies (Euler 2011). The sociological life course perspective is useful from this point of view and especially when examining intergenerational family relations. It takes into account the changes that have happened in society and changes that happen during the individual life course (see, e.g. Settersten 2003; Mayer 2009; see also biological counterpart: life-history theory of evolution, e.g. Stearns 1992).

Yet, there is one obvious flaw in many sociological studies about grandparenting. Grandparents are often handled with one equal group, only grandmothers and grandfathers are separated or only one grandparent is lifted up as an example (see, e.g. Attar-Schwartz et al. 2009a; Euler and Michalski 2007 for discussion). This is

an interesting point because one of the most robust findings in grandparental studies is that grandparents are not in an equal position in relation to a grandchild. Maternal grandmothers tend to be involved in their grandchild's life the most, following maternal grandfathers and paternal grandmothers and finally paternal grandfathers who are the least involved (e.g. Kahana and Kahana 1970; Eisenberg 1988; Euler and Weitzel 1996; Euler et al. 2001; Mills et al. 2001; Sear and Mace 2008; Griggs et al. 2010; Danielsbacka et al. 2011; Coall and Hertwig 2010; Euler 2011 for review).

As the fundamental reason for grandparental attachment, evolutionary perspective explicates coherently why grandparents are not equal (e.g. Euler and Weitzel 1996). It is biologically much more costly to women than to men to reproduce and in addition women are physiologically obligated to provide more parental investment than men. This has led to the different sex-specific reproductive strategies which also explain many (maybe even most) other behavioural differences between the two sexes. Hence, for women it is much more important from a viewpoint of reproductive success to keep children alive whereas for men it may not have been that profitable as what it comes to maximizing their genes in future generations (Trivers 1972; Coall and Hertwig 2010). This is one reason for the common result of matrilineality in family relationships: women are more supported by their own kin because usually the support directed towards own female kin focus more likely also on the offspring.

In addition, it is a fact that a woman can be sure that the child she gives birth is her own but a man can never be as sure that the child really is his. The studies show that this paternity uncertainty has continuing effects on modern societies (see, e.g. Daly and Wilson 1982; Danielsbacka et al. 2011). It should be pointed out that the effects of paternity uncertainty are not necessarily in contact with actual non paternity rates (cf. Gilding 2009) which have been estimated to between two and three percent in contemporary industrialized societies (Anderson 2006; Bellis et al. 2005; Voracek et al. 2008) but the important point is the potentiality of non paternity. It should also be pointed out that in general the evolutionary predispositions which might shape human's behaviour are not consciously intended motives for action but rather unconscious potentials which can be easily triggered out by the support of surrounding environment.

In this study, we take as a starting point the idea that grandparents do differ from each other and that it is important to study grandparental involvement in grandchildren's life and the factors that are connected to the involvement for each grandparent separately (see Euler 2011). Our theoretical perspective is twofold: we see the formation of a grandparent–grandchild relationship as a

product of deep evolutionary shaped behavioural predispositions and sociological proximate causes.

To study grandparental involvement and factors that are connected to it we have searched from previous studies several factors which are related to grandparent's willingness or possibilities to involve in his or her grandchild's life. We have grouped these factors and the prediction they make on grandparental involvement in the light of evolutionary theory and sociological life course perspective.

Evolutionary theory perspective

The main prediction that evolutionary theory makes is that the sex and the lineage matters. One of the strongest predictions is the order of grandparents (1) maternal grandmother, (2) maternal grandfather, (3) paternal grandmother, (4) paternal grandfather which is due to the paternity uncertainty and preferential investment in more certain kin (see, e.g. Laham et al. 2005; Danielsbacka et al. 2011). According to evolutionary theory and its emphasis on the sex and the lineage we may form following predictions about the relevant connections between different variables and grandparental involvement.

Sex of grandparent and grandchild

From evolutionary viewpoint the sex and the lineage of a grandparent obviously has an effect on grandparental involvement (see above) but the effect of a sex of a grandchild is not so explicit. For instance paternity uncertainty makes no difference between granddaughters and grandsons. However, according to the asymmetric inheritance of the sex chromosomes, especially of the X chromosomes, grandparents may favour grandchildren based on their sex. In respect with autosomes grandparents are equally related to grandchildren but not with sex chromosomes. Males are heterozygous for the sex chromosomes and therefore paternal grandparents are asymmetrically related to granddaughters and grandsons. Grandfathers are more related to grandsons than granddaughters. Due to sex chromosomes, grandmothers are genetically more related to female than to male grandchildren (see Chrastil et al. 2006; Fox et al. 2010; Tanskanen et al. 2011). According to the variation in genetic relatedness between grandparents and grandchildren, we may predict that paternal grandmothers are more involved in their granddaughters' than in their grandsons' life and that paternal grandfathers are more involved in their grandsons' than in their granddaughters' life. Former studies have not found convincing evidence of sex discrimination by grandparents (e.g., Chrastil et al. 2006; Tanskanen et al. 2011).

Marital status of grandparent and parent

From evolutionary theory perspective the interaction of a marital status of a grandparent with the sex and lineage of a grandparent is of interest. Due to the matrilineal effect (i.e. matrilineal kin ties are usually stronger due to the sex-specific reproduction strategies) living without a spouse should matter more for grandfathers than for grandmothers. We may also form an *incidental exposure hypothesis* (see Euler and Michalski 2007) which may explain why maternal grandfathers usually get more involved in grandchildren's life than paternal grandmothers do even though they have the same genetic certainty to be related to a grandchild. Maternal grandmother is most of all involved in her grandchildren's life and her spouse that is to say maternal grandfather is also often present. Hence he becomes incidentally exposed to the grandchildren too. According to the incidental exposure hypothesis the presence or the absence of spouse do not have an effect on the involvement made by the maternal grandmother. The absence of spouse, however, matters little for the paternal grandmother, more for the maternal grandfather and the most for the paternal grandfather (Euler and Michalski 2007).

The marital status of a parent also matters. From evolutionary viewpoint the attachment to (alleged) biological relative should be stronger than to in-law (of the importance of biological kinship see, e.g. Schnettler and Steinbach 2011). Hence, it may be predicted that grandparental involvement depends partly on with whom the child end up living with in case of divorce because parents may act as gatekeepers (see Robertson 1975) between the grandparent and the grandchild. The children living only with their mother should receive more involvement from maternal grandparents and the children living with their father should receive more involvement from paternal grandparents.

The age of grandparent and grandchild

Evolutionary theory predicts grandparental involvement to depend partly on its age-dependent fitness effect (Euler 2011). This means that the infant grandchildren, who are the most vulnerable, get the most grandparental involvement but it also suggests that those grandchildren, who are biologically at the beginning of their reproductive career, get more grandparental involvement. The effect of grandparent age is less clear because due to aging the physical resources might reduce and at the same time nepotistic interest in the grandchildren's well-being might increase (Alexander 1987). Hence, it is difficult to evaluate the actual age-effect.

Life course perspective

The sociological life course perspective predicts that grandparental involvement is bound to the place and time people are living (Elder and Kirkpatrick Johnson 2003; Giele and 1998; Kemp 2007; Settersten 2003), that each relationship between family members are influenced by each other in family connections (Cox and Paley 1997) and that the age and the phase of life of each family member affect the relationships between them (Elder 1994). According to this perspective, we may form following presuppositions about the connections between different variables and the grandparental involvement.

The life course perspective recognizes also the relevance of *the sex of grandparent and the sex of grandchild* but it has not produced clear predictions about the differences based on it. The one prediction concerning the grandparent's sex is that women are, mainly due to norm structures and socially constructed roles, the 'kin-keepers' (Spitze and Ward 1998) and therefore they are more inclined to invest their time and resources into the family. In relation to the sex of grandparent and grandchild it has been said that the same-sex grandparent–grandchild dyads are closer that is to say grandmothers are closer with granddaughters and grandfathers with grandsons. Dubas (2001) detected a closer relationship in same-sex grandparent–grandchild dyads, but many studies have not found evidence for sex discrimination (Block 2000; Mueller and Elder 2003; Triado et al. 2005; Höpfinger and Hummel 2006).

The clearest determinants of grandparental involvement from the life course perspective are the age of grandparent and grandchild. The previous findings on the correlation between *grandparent's age* and grandparental involvement are, however, unclear (see Euler and Michalski 2007; Wood and Liossis 2007) and probably correlate with *grandparent's health* meaning that older grandparents might also be in poorer health than the younger ones. Grandparent's age is also linked to the type of involvement. Involvement that requires physical activity might correlate negatively with the age of a grandparent whereas emotional involvement might not be affected by age of a grandparent. According to a study that concerns grandparenting in Britain, the grandparental involvement and *the age of the grandchild* correlates negatively (Dench and Ogg 2003) that is when the age of a child increases the grandparental involvement decreases. However, it is important to notice that the form of involvement may change when the grandchild is growing. Probably grandparents look after the younger children most while the older grandchildren may receive more financial support and advice from grandparents (Silverstein and Marengo 2001).

Related to the grandparents' phase of life the *labour force participation of grandparent* is of importance here. Many of grandparent-age people are working part time or have already retired. Hank and Buber (2009) have argued that grandmothers' increasing labour force participation may reduce grandparental involvement in grandchildren. They have focused on grandparental child care, but it is possible that the same effect is also valid for other forms of grandparental involvement and that the same effect may also be valid in the case of grandfathers.

From a life course perspective the central importance in family relations is on interdependence among lives (see, e.g. Hagestad 2003). This means that the number of living relatives matters as well as a family structure. Previous findings show that the *number of grandchildren* is related to the amount of grandparents' involvement in one particular grandchild (e.g. Smith 1991). The total number of grandchildren may limit the grandparental involvement in a particular grandchild (Elder and Conger 2000; Mueller and Elder 2003). The number of other grandparents still alive might also make a difference with respect of grandparental involvement. It has been suggested that grandparental involvement decreases if a grandchild has more than one grandparent alive but the theory has not gained support from previous studies (Euler and Weitzel 1996; Pashos 2000). From these presumptions we may form a *dilution effect hypothesis* which states that the number of grandchildren and the number of grandparents have a dilution effect on grandparental involvement.

Related to interdependence among lives the marital status of grandparent and parent is also relevant. It has been illustrated in many studies that if parents divorce, the grandparent–grandchild relationship often suffers, particularly or only on the patrilineal side (Hagestad 2006; Silverstein et al. 2003). The same can be predicted to happen in the case of grandparents divorce.

In addition, *geographical distance* between grandparent and grandchild has a strong influence on the frequency of grandparental involvement and this can also be integrated into the life course perspective. The greater the distance, the lesser grandparents' are involved in their grandchildren's life (see, e.g. Hank and Buber 2009; Pollet et al. 2006, 2007; Euler and Weitzel 1996; Smith 1991).

The present study

In this study, we investigate the associations between different background variables and grandparental involvement with all four grandparents separately. We construct our analysis of the variables that make a difference based on former studies and hypotheses that have been formulated in those studies.

Evolutionary theory predictions

Sex and lineage

The rank order of grandparents' goes as follows: (1) maternal grandmother, (2) maternal grandfather, (3) paternal grandmother, (4) paternal grandfather. If the grandchild's sex matters, it should show as paternal grandmother's preference on granddaughters and paternal grandfather's preference on grandsons.

Marital status of grandparent and parent

Grandfathers who live without a spouse should be less involved in their grandchild's life than those grandfathers living with the grandmother of a grandchild (also incidental exposure hypothesis) and children living only with their mother should be less in contact with paternal grandparents as well as children living only with their father should be less in contact with maternal grandparents.

The age of grandparent and grandchild

Older grandparents—in case they are healthy—should be more involved in their grandchildren's life than the younger ones and grandchildren who are at the beginning of their reproductive career (i.e. adolescents) should receive more grandparental involvement.

Life course perspective

Sex and lineage

No clear prediction, but in general grandmothers as 'kin-keepers' should be more involved than grandfathers in their grandchildren's life and same-sex grandparent–grandchild dyads might be closer.

The age of grandparent and grandchild

Grandparent's age might be connected to the grandparental involvement together with grandparent's health thus the older and in poorer health the grandparents are the less they are involved in their grandchildren's life. In addition, the older the grandchildren are the less they receive involvement from grandparents.

The labour force participation of grandparent

We expect that the adolescent grandchildren are reporting more involvement especially from non-working than working grandmothers, but possibly also from non-working grandfathers.

The marital status of grandparent and parent and the family composition

Parents' or grandparents' divorce diminish the grandparental involvement in grandchildren by paternal side. The more there is grandchildren or grandparents the less one particular grandchild receives involvement.

Geographical distance

The further the distance between a grandparent and a grandchild is the lesser they should be in contact with each other.

Methods

We use 'the Involved Grandparenting and Child Well-Being 2007' survey, which is the first nationally representative sample of British and Welsh adolescent aged 11–16. The survey concentrates on adolescents views on their relationships with their grandparents (see also Attar-Schwartz et al. 2009a, b; Griggs et al. 2010; Tan et al. 2010; Tanskanen et al. 2011 who have used the same data). The sample was recruited by GfK National Opinion Polls. 103 schools were randomly selected using probability proportionate-to-size sampling which means that larger schools had greater probability to be included in the final sample. Seventy schools returned the questionnaires (response rate of 68 %). Respondents completed the questionnaire in a school classroom. In every selected school the classes were randomly chosen. The original sample consisted of 1,566 adolescent's but we have excluded those participants who did not have any living grandparent. Hence, the resulting data includes 1,488 adolescents who have at least one grandparent alive. When filling in the questionnaire, respondents were asked to answer questions for only those grandparents who were still alive.

The characteristics of adolescents who participated in the survey are broadly representative by age, gender, ethnic origin, family background (Office for National Statistics 2007, p. 5), and family socio-economic background of adolescents in England and Wales. They were approximately equally males and females and the average of age was 13.4 years. Majority of them were from intact families (65 %), about 17 % from lone-parent families (most were living with their mother) and about 16 % from stepfamilies (most were living with their mother and her new partner). Over 90 % of the adolescents reported their ethnicity as White–Caucasian (Attar-Schwartz et al. 2009b).

In this study, we use as a dependent variable the *grandparental involvement* variable which is made by

Table 1 Grandparental involvement: mean, standard deviation and total *n*

	Maternal grandmother	Maternal grandfather	Paternal grandmother	Paternal grandfather
Mean	12.0	11.5	11.0	10.6
SD	2.3	3.1	2.9	3.0
<i>n</i>	1,162	908	982	757

summing up answers for six different questions which can be interpreted to measure different aspects of grandparent's involvement. The questions are: 'How often do your grandparents look after you? Do they get involved with things you like? Do they come to school or other events that are important to you? How often do you talk to them about problems you have? Can you talk to them about your future plans? Do they give you money or help in any other way?' Each question was assessed on a three-point Likert-type scale (ranging from 1 = never to 3 = usually) and each question was asked separately for each grandparent. The scale of summed involvement variables is growing thus higher number means stronger involvement (scale 6–18). The Cronbach's alpha of the involvement measure for the each grandparent in this study was sufficient (maternal grandmother $\alpha = 0.79$, maternal grandfather $\alpha = 0.81$, paternal grandmother $\alpha = 0.79$, paternal grandfather $\alpha = 0.82$). The descriptive statistics of four grandparental involvement variables are presented in Table 1.

As independent variables we use grandchild's (respondent) sex, age, family structure (with whom the respondent lives most of the time), the number of living grandparents, the distance between a grandparent and a grandchild, grandparent's age, labour market status, marital status, health and the number of grandchildren (see Table 2). Almost all independent variables (except for the age of grandchild) are classified and thus for the linear regression model we transformed them into the dummy variables.

We use linear regression analysis to explore what kind of connections different background variables have on grandparental involvement when all other background variables are controlled for. Linear regression models are formed and presented for each of the grandparents separately. These four models show statistical significances in differences within a particular background variable and how it is connected to a particular grandparent's involvement (increasing or decreasing it compared to comparison group).

Results

Figure 1 illustrates the descriptive results of the dependent variable with 95 % confidence intervals. The results are presented firstly by each grandparent separately and

secondly within those children who have all four grandparent alive. Grandparents' involvement follows the well known pattern: maternal grandmother is reported to be most involved in her grandchild's life, next paternal grandfather following paternal grandmother and finally paternal grandfather. The pattern holds even when all grandparents are alive and the importance of maternal grandmother actually becomes emphasized further.

The results from four linear regression models are presented in the Table 3. In general, the girls are reporting more involvement from their grandparents but the difference between boys and girls is statistically significant only in the case of maternal grandmother. Grandchild's age on the other hand makes statistically significant difference in relation to every grandparent. The older the grandchild is the less he or she reports involvement from his or hers particular grandparent.

Grandchild's family structure has an impact on the grandparental involvement. Those children who live only with their mother report statistically significantly less involvement from their paternal grandmother than those children who live with both parents. Likewise those children who live only with their father report statistically significantly less involvement from their maternal grandmother and maternal grandfather and they also report significantly more involvement from their paternal grandmother than those children who live with both parents.

Distance between a grandchild and a grandparent matters as expected: the further grandchild and grandparent live from each other the smaller the grandparental involvement is. Grandparent's age has also an effect in the case of maternal grandmother, paternal grandmother and paternal grandfather. The younger the grandparent is the more grandchildren are reporting involvement from him or her.

Grandparent's labour force participation also differentiates the involvement reported by grandchildren. Those maternal grandmothers, paternal grandmothers and paternal grandfathers who are working part time compared to those grandparents who are working full time are more involved in their grandchildren's life. The ones who are not working at all are also more involved in their grandchildren's life but not as much more as those who have a part time job. Only in the case of maternal grandfathers not working at all makes a bigger difference than working part time compared to those maternal grandfathers who are working full time.

Grandparent's marital status has an effect only on grandfathers' involvement. Grandfathers who have never been married or who have divorced are statistically significantly less involved with their grandchildren's life than those grandfathers who are married (with the grandmother of his grandchildren). In addition, remarrying reduces maternal and paternal grandfathers' involvement in his

Table 2 Descriptive statistics of background variables (*n* and %/mean)

	Maternal grandmother		Maternal grandfather		Paternal grandmother		Paternal grandfather	
	<i>n</i>	%/mean	<i>n</i>	%/mean	<i>n</i>	%/mean	<i>n</i>	%/mean
Grandchild's sex (%)								
Boy	577	50.7	458	51.5	488	50.4	382	51.3
Girl	560	49.3	431	48.5	480	49.6	362	48.7
Total	1,137		889		968		744	
Grandchild's age (%)								
11	92	8.0	77	8.5	77	7.9	64	8.5
12	290	25.1	217	24.1	235	24.0	180	23.8
13	230	19.9	188	20.8	201	20.5	153	20.3
14	272	23.5	207	22.9	220	22.5	171	22.6
15	198	17.1	153	17.0	176	18.0	132	17.5
16	74	6.4	60	6.7	70	7.2	55	7.3
Total	1,156		902		979		755	
Grandchild's family structure								
Lives with mother and father	741	65.5	563	64.0	628	66.0	482	65.3
Lives only with mother	181	16.0	149	16.9	146	15.3	118	16.0
Lives only with father	17	1.5	13	1.5	17	1.8	13	1.8
Lives with mother and her new partner	175	15.5	139	15.8	140	14.7	111	15.0
Lives with father and his new partner	18	1.6	16	1.8	21	2.2	14	1.9
Total	1,132		880		952		738	
Distance (%)								
Same town or together	507	44.7	317	43.4	344	37.0	233	33.5
Within 10 km (not in same town)	282	24.9	205	24.0	246	26.5	202	29.1
Further (in the UK)	256	22.6	215	25.1	270	29.1	209	30.1
Further (overseas)	89	7.8	64	7.5	69	7.4	51	7.3
Total	1,134		801		929		695	
Grandparent's age (%)								
Fifties or below	183	18.1	89	11.8	77	9.7	44	7.4
Sixties	480	47.4	366	48.5	394	49.7	282	47.3
Over seventy	349	34.5	299	39.7	322	40.6	270	45.3
Total	1,012		754		793		596	
Grandparent's labour force participation (%)								
Full time job	110	10.3	131	16.5	73	8.7	79	12.9
Part time job	190	17.8	146	18.4	114	13.5	82	13.4
Not working	770	72.0	516	65.1	656	77.8	452	73.7
Total	1,070		793		843		613	
Marital status of grandparent (%)								
Married	806	76.4	651	76.8	684	80.8	541	80.6
Never married or divorced	183	17.3	122	14.4	119	14.0	84	12.5
Remarried	66	6.3	75	8.8	44	5.2	46	6.9
Total	1,055		848		847		671	
Grandparent's health (%)								
Very poor or poor	157	14.8	158	19.4	145	16.8	151	23.3
Good	593	55.8	409	50.2	483	55.9	316	48.8
Very good	313	29.4	247	30.3	236	27.3	181	27.9
Total	1,063		814		864		648	
Number of grandchildren (%)								
Only respondent	39	3.5	25	3.0	28	3.1	25	3.7

Table 2 continued

	Maternal grandmother		Maternal grandfather		Paternal grandmother		Paternal grandfather	
	<i>n</i>	%/mean	<i>n</i>	%/mean	<i>n</i>	%/mean	<i>n</i>	%/mean
2 or 3	317	28.8	256	30.7	255	28.4	189	28.1
4 or more	743	67.6	553	66.3	614	68.5	458	68.2
Total	1,099		834		897		672	
Number of living grandparents (%)								
Only one	98	8.4	24	2.6	43	4.4	11	1.5
Two	254	21.9	174	19.2	157	16	96	12.7
Three	375	32.3	289	31.8	363	37	233	30.8
All four	435	37.4	421	46.4	419	42.7	417	55.1
Total	1,162		908		982		757

Fig. 1 Mean involvement by each grandparent and 95 % confidence intervals reported from grandparents separately and within those respondents who have all four grandparents alive

grandchild's life but the difference compared to those grandfathers who are married with the child's grandmother is statistically significant only in the case of maternal grandfather. In the case of either grandmother the marital status makes no statistically significant difference between married ones and others. In addition, we examined the correlations between the involvements of grandmother–grandfather-couple (not shown in the Table 3). The correlations were very high between the maternal grandmother and the maternal grandfather involvement ($r = 0.703$, $p < 0.01$) as well as between the paternal grandmother and the paternal grandfather involvement ($r = 0.814$, $p < 0.01$). This can also be interpreted to confirm the effect of marital status.

Grandparent's health makes a difference in respect of all grandparents. The better the grandchildren evaluate their grandparents' health to be the more they also report their grandparents' to be involved in their life. The number of grandchildren, especially when it is two or three, enhances statistically significantly maternal grandfather's, paternal grandmother's and paternal grandfather's involvement in

their particular grandchild's life compared to those who have only one grandchild (i.e. the respondent). Those grandfathers' who have four or more grandchildren are also statistically significantly more involved their particular grandchild's life than those grandfathers' who have only one grandchild. However, number of living grandparents does not produce any differences except in the case of maternal grandmother. Those grandchildren who have all four grandparents alive are reporting statistically significantly more involvement from their maternal grandmother than those grandchildren who have only the maternal grandmother alive.

Conclusions

In this article, we have studied grandparents' involvement in their grandchildren's life reported by adolescent grandchildren. Many of our findings are consistent with the previous studies but the major advantage of this study is that here we have an analysis for each grandparent separately and with several background variables (cf. Tan et al. 2010). Firstly, we can conclude that grandparents do differ from each other as for the amount of the involvement. British and Welsh adolescents are reporting most involvement from maternal grandmother, next from maternal grandfather, then from paternal grandmother and the least from paternal grandfather. This is consistent with the prediction of evolutionary theory. Interesting result was that maternal grandmother's involvement actually increases in relation to other grandparents when the respondent has all four grandparents alive. This result emphasizes even further the importance of maternal grandmother. Cases where maternal grandmother is lost early require more investigation, because the other grandparents may substitute this lost and this may have an effect on the grandparents' ranking order. In addition, it would be worth

Table 3 Linear regression analyses of grandparental involvement and background variables in case of each grandparent

	Maternal grandmother			Maternal grandfather			Paternal grandmother			Paternal grandfather		
	<i>B</i>	Std. error	<i>t</i>	<i>p</i>	<i>B</i>	Std. error	<i>t</i>	<i>p</i>	<i>B</i>	Std. error	<i>t</i>	<i>p</i>
Grandchild's sex												
Boy (ref.)												
Girl	0.655	0.161	4.059	0.000	0.223	0.186	1.197	0.232	0.328	0.174	1.891	0.059
Grandchild's age	–0.291	0.058	–5.033	0.000	–0.205	0.066	–3.113	0.002	–0.362	0.062	–5.859	0.000
Grandchild's family structure												
Lives with mother and father (ref.)												
Lives only with mother	–0.054	0.226	–0.238	0.812	–0.112	0.256	–0.439	0.661	–0.668	0.250	–2.666	0.008
Lives only with father	–1.334	0.664	–2.009	0.045	–2.115	0.797	–2.653	0.008	1.399	0.659	2.124	0.034
Lives with mother and her new partner	0.231	0.232	0.993	0.321	0.133	0.263	0.506	0.613	–0.287	0.256	–1.123	0.262
Lives with father and his new partner	–0.994	0.661	–1.504	0.133	–0.413	0.712	–0.579	0.563	1.007	0.609	1.654	0.099
Distance												
Same town or together (ref.)												
Within 10 km (not in same town)	–0.386	0.203	–1.907	0.057	–0.142	0.236	–0.602	0.547	–0.025	0.219	–0.113	0.910
Further (in the UK)	–1.409	0.209	–6.728	0.000	–1.035	0.237	–4.365	0.000	–0.898	0.214	–4.205	0.000
Further (overseas)	–1.785	0.317	–5.637	0.000	–1.521	0.374	–4.067	0.000	–1.130	0.352	–3.206	0.001
Grandparent's age												
Sixties (ref.)												
Fifties or below	0.586	0.237	2.477	0.013	0.512	0.324	1.580	0.115	1.101	0.335	3.281	0.001
Over seventy	0.005	0.194	0.024	0.980	0.084	0.214	0.392	0.695	0.285	0.199	1.435	0.152
Grandparent's labour force participation												
Full time job (ref.)												
Part time job	0.853	0.277	3.078	0.002	0.264	0.294	0.896	0.371	1.132	0.320	3.535	0.000
Not working	0.838	0.232	3.609	0.000	0.766	0.235	3.262	0.001	0.950	0.231	4.118	0.000
Marital status of grandparent												
Married (ref.)												
Never married or divorced	–0.303	0.221	–1.372	0.170	–2.095	0.273	–7.682	0.000	–0.290	0.267	–1.087	0.277
Remarried	–0.243	0.349	–0.697	0.486	–1.014	0.344	–2.945	0.003	–0.061	0.414	–0.147	0.883
Grandparent's health												
Very poor or poor (ref.)												
Good	1.438	0.206	6.972	0.000	1.343	0.224	5.989	0.000	1.232	0.213	5.796	0.000
Very good	2.095	0.236	8.879	0.000	2.460	0.253	9.735	0.000	2.078	0.251	8.275	0.000

Table 3 continued

	Maternal grandmother			Maternal grandfather			Paternal grandmother			Paternal grandfather						
	<i>B</i>	Std. error	<i>t</i>	<i>p</i>	<i>B</i>	Std. error	<i>t</i>	<i>p</i>	<i>B</i>	Std. error	<i>t</i>	<i>p</i>				
Number of grandchildren																
Only respondent (ref.)																
Two or three	0.511	0.316	1.620	0.106	1.130	0.336	3.360	0.001	0.998	0.320	3.119	0.002	0.820	0.347	2.361	0.019
Four or more	0.082	0.291	0.282	0.778	0.675	0.308	2.189	0.029	0.524	0.292	1.793	0.073	0.676	0.308	2.195	0.028
Number of living grandparents																
Only one (ref.)																
Two	0.380	0.330	1.151	0.250	-0.305	0.609	-0.500	0.617	0.109	0.461	0.237	0.812	-1.145	0.877	-1.305	0.192
Three	0.331	0.316	1.046	0.296	-0.651	0.597	-1.091	0.275	-0.221	0.433	-0.509	0.611	-1.144	0.846	-1.348	0.178
All four	0.789	0.320	2.463	0.014	-0.131	0.592	-0.222	0.825	0.102	0.435	0.234	0.815	-0.816	0.844	-0.967	0.334
<i>n</i>	1,132				884				965				742			
Adjusted <i>R</i> ²	19.0				24.0				18.7				19.8			

studying how the absence of other grandparents may affect the involvement pattern.

Secondly, we can conclude that different factors played somewhat different roles within each grandparent. As we focused our analyses towards each grandparent we found out that different factors were differently connected to involvement in case of each grandparent. Some background factors systematically increase or decrease the grandparental involvement in relation to every grandparent. The first is the age of a grandchild. Contrary to the evolutionary prediction of age-dependent fitness effect (beginning of biological reproduction age should increase grandparental involvement in grandchild) each grandparent's involvement decreases the older the grandchild is (range 11–16 years old). This finding is, however, consistent with former sociological studies (see, e.g. Dench and Ogg 2003) and it is consistent with the life course perspective. The diminution of contact between a grandparent and a grandchild the older the grandchild is, is probably related to life course and the matter that adolescents usually try to disengage oneself from family and integrate more in their own peer group at certain age. The relationship with a particular grandparent might, however, come closer again when the grandchild is past adolescence.

The second is distance. The further the distance between grandparent and grandchild, the lesser is the grandparental involvement. The effect of the distance is quite self-evident and consistent with the former results (e.g. Hank and Buber 2009). Furthermore it integrates into life course perspective quite easily.

The third is grandparents labour force participation. Those maternal grandmothers, paternal grandmothers and paternal grandfathers who are working part time are more involved in their grandchildren's life than those equivalent grandparents who are working full time. Not working at all increased every grandparent's involvement as compared to full time workers but only in the case of maternal grandfather the increase in involvement is larger than if they are working part time. Reduction in labour force participation makes the presupposed difference which is congruent with former results (e.g. Hank and Buber 2009) and with the assumption made by life course perspective. However, it is interesting that the labour force participation has an effect on grandfathers' involvement too and in respect to most grandparents the involvement increases more when grandparent is working part time, not when he or she is not working at all. The latest result might be due to the fact that not working grandparents are also older and maybe in poorer health. In fact the fourth factor which makes similar distinctions in respect of every grandparent is grandparent's health. The better the grandparent's health, the more involvement grandchild reports from he or she.

Besides the sex and the lineage of a grandparent, the clearest factor which seems to separate grandmothers and grandfathers from each other is a marital status of a grandparent. In this respect, our study gives strong support for the matrilineal effect predicted by evolutionary theory and also for the incidental exposure hypothesis. Grandfathers' who are not married with the grandmother of a grandchild are less involved in their grandchild's life. Also correlations between grandmother and grandfather-couple involvements support the incidental exposure hypothesis. However, our results do not seem to follow accurately the pattern formed of incidental exposure hypothesis. According to Euler and Michalski (2007) the presence or the absence of spouse should not effect on the involvement made by maternal grandmother, but it should matter little for paternal grandmother, more for maternal grandfather and the most for paternal grandfather. In our analyses, the difference between married and not married ones is statistically significant only in the case of grandfathers and not significant in the case of either grandmother. It is also interesting to see that remarrying seems to affect only the involvement made by maternal grandfather and that the effect is negative that is to say remarrying reduces maternal grandfathers' involvement. These results might further highlight the remarkably important role of the maternal grandmother.

The effect of grandchild's family structure emphasises the difference between maternal and paternal side. As the evolutionary theory predicts, the ties towards one's own relatives are stronger than towards in-laws. Those children who live only with their mother compared to those children who live with their mother and father are reporting significantly less involvement from their paternal grandmother. Likewise those children who are living only with their father compared to those children who live with their mother and father are reporting significantly less involvement from their maternal grandmother and maternal grandfather and in addition they are reporting more involvement from their paternal grandmother. Thus, the grandparent–grandchild relationship in general does not necessarily suffer from parents divorce and the effect of divorce does not necessarily show only on paternal side as the life course perspective assumes (Hagestad 2006; Silverstein et al. 2003) but the reduction in grandparental involvement depends on the lineage.

The result for the effect of grandchild's sex is mixed and weak. Girls are reporting more involvement from each grandparent but the difference between girls and boys is statistically significant only in relation to maternal grandmother. Hence, our results do not support unequivocal either the evolutionary predictions (preference according the sex chromosome relatedness) or life course perspective (same-sex preference). Not finding any consistent pattern

in relation to sex of a grandchild is partly consistent with another study made with the same data but with wider range of involvement variables where authors did not found any biases particularly in paternal grandmothers' involvement with granddaughters and grandsons. However, there was some bias in total noninvolvement made by paternal grandmother in disadvantage to granddaughters (Tanskanen et al. 2011).

The number of grandchildren and the number of living grandparents does not appear to produce any dilution effect in relation to grandparental involvement. On the contrary the maternal grandfathers, paternal grandmothers and paternal grandfathers are more involved in one particular grandchild's life when they have two or three grandchildren compared to those grandparents who have only one grandchild. The number of living grandparents does not affect any grandparents involvement except the maternal grandmother's, who, on the contrary to the dilution hypothesis, is more involved in her grandchild's life when the child has all four grandparent alive compared to the situation that the maternal grandmother is the only one alive.

There are some limitations relating to the data used in this study. Children being the respondents has its' advantages and disadvantages. Grandparents might not be the ideal source of information, as they may wish to present their involvement as equal in all children (see Euler and Weitzel 1996; Euler et al. 2001; Laham et al. 2005; Danielsbacka et al. 2011) and in this respect the children as a source of information might be more reliable. Although children aged 11–16 years old might not be aware of their grandparents labour force participation, their health or even their age quite accurately, they are still the best information source in the case of complex research frame such as one interested in here. Because of the lineage, it would come too complicated to ask either grandparents or parents about grandparental involvement in relation to each grandparent and a particular grandchild.

In spite of the limitations, the empirical results of this article which concern the sex and the lineage of a grandparent, marital status of parents and marital status of grandparents indicate that there are clear differences between men and women in their behaviour within the family context. From evolutionary viewpoint sex-specific reproductive strategies suggest that women are more inclined to be in close contact with kin and the results support these presuppositions. The results are also in line with sociological hypothesis that states women are the kin-keepers (see, e.g. Dubas 2001). The main difference between sex-specific reproductive strategies and its effects on human behaviour and kin keeper theory is that the former takes starting point from biology and evolution whereas the latter argues the distinctions are merely due to

the different learned behaviour and role expectations made for men and women.

However, the predictions made by evolutionary theory and sociological life course perspective are not mutually exclusive but rather complementary to each other in most cases. To conclude, observing grandparental involvement from the viewpoint that takes the sex and the lineage of a grandchild and a grandparent into account offers new and fruitful direction for grandparenting research. In the forthcoming studies especially the lineage and the sex of a parents' generation should take more into account in order to see for example are parents favouring their own kin and disfavouring their spouse's kin. The influence of the sex of a grandchild requires also more investigation. Open question is for example, is there any coherent theory which explains the effect of grandchild's sex on the grandparent's involvement.

Acknowledgments We wish to thank Ann Buchanan and the research team for making the Involved Grandparenting and Child Well-Being 2007 data available. We also thank two anonymous reviewers and the editor for their helpful comments. The research is part of the research project Generational Transmissions in Finland (Gentrans) at the University of Helsinki funded by the Academy of Finland.

References

- Alexander RD (1987) *The biology of moral systems*. Aldine de Gruyter, New York
- Anderson KG (2006) How well does paternity confidence match actual paternity? Evidence from worldwide nonpaternity rates. *Curr Anthropol* 48:511–518
- Attar-Schwartz S, Tan J-P, Buchanan A, Flouri E, Griggs J (2009a) Grandparenting and adolescent adjustment in two-parent biological, lone-parent, and step-families. *J Fam Psychol* 23:67–75
- Attar-Schwartz S, Tan J-P, Buchanan A (2009b) Adolescents' perspectives on relationships with grandparents: the contribution of adolescent, grandparent, and parent–grandparent relationship variables. *Child Youth Serv Rev* 31:1057–1066
- Bellis MA, Hughes K, Hughes S, Ashton JR (2005) Measuring paternal discrepancy and its public health consequences. *J Epidemiol Community Health* 59:749–754
- Block CE (2000) Dyadic and gender differences in perceptions of the grandparent–grandchild relationship. *Int J Aging Hum Dev* 51:85–104
- Chrastil ER, Getz WM, Euler HA, Starks PT (2006) Paternity uncertainty overrides sex chromosome selection for preferential grandparenting. *Evol Hum Behav* 27:206–223
- Coall DA, Hertwig R (2010) Grandparental investment: past, present, and future. *Behav Brain Sci* 33:1–59
- Coall DA, Hertwig R (2011) Grandparental investment: a relic of the past or a resource for the future? *Curr Dir Psychol Sci* 20:93–98
- Cox MJ, Paley B (1997) Families as systems. *Annu Rev Psychol* 48:243–267
- Daly M, Wilson M (1982) Whom are newborn babies said to resemble? *Ethol Sociobiol* 3:69–78
- Danielsbacka M, Tanskanen AO, Jokela M, Rotkirch A (2011) Grandparental child care in Europe: evidence for preferential investment in more certain kin. *Evol Psychol* 9:3–24
- Dench G, Ogg J (2003) *Grandparenting in Britain: a baseline study*, 2nd edn. Antony Rowe Ltd, Eastbourne
- Dubas JS (2001) How gender moderates the grandparent–grandchild relationship: a comparison of kin-keeper and kin selector theories. *J Fam Issues* 22:478–492
- Eisenberg AR (1988) Grandchildren's perspectives on relationships with grandparents: the influence of gender across generations. *Sex Roles* 19:205–217
- Elder GH (1994) Time, human aging and social change. Perspectives on the life course. *Soc Psychol Q* 57:4–15
- Elder GH Jr, Conger RD (2000) *Children of the land: adversity and success in rural America*. University of Chicago Press, Chicago
- Elder GH Jr, Kirkpatrick Johnson M (2003) The life course and aging: challenges, lessons, and new directions. In: Settersten RA Jr (ed) *Invitation to the life course: toward new understandings of later life*. Baywood, Amityville, pp 48–81
- Euler HA (2011) Grandparents and extended kin. In: Salmon CA, Shackelford TK (eds) *The Oxford handbook of evolutionary family psychology*. Oxford University Press, New York, pp 181–210
- Euler HA, Michalski R (2007) Grandparental and extended kin relationships. In: Salmon CA, Shackelford TK (eds) *Family relationships: an evolutionary perspective*. Oxford University Press, New York, pp 230–255
- Euler HA, Weitzel B (1996) Discriminative grandparental solicitude as reproductive strategy. *Hum Nat* 7:39–59
- Euler HA, Hoier S, Rohde PA (2001) Relationship-specific closeness of intergenerational family ties: findings from evolutionary psychology and implications for models of cultural transmission. *J Cross Cult Psychol* 32:147–158
- Fox M, Sear R, Beise J, Ragsdale G, Volland E, Knapp LA (2010) Grandma plays favourites: X-chromosome relatedness and sex-specific childhood mortality. *Proc R Soc B Biol Sci* 277:567–573
- Giele JZ, Elder GH Jr (1998) Life course research: development of a field. In: Giele JZ, Elder GH Jr (eds) *Methods of life course research: qualitative and quantitative approaches*. Sage, Thousand Oaks, pp 5–27
- Gilding M (2009) Paternity uncertainty and evolutionary psychology: how a seemingly capricious occurrence fails to follow laws of greater generality. *Sociology* 43:140–157
- Griggs J, Tan J-P, Buchanan A, Attar-Schwartz S, Flouri E (2010) 'They've always been there for me': grandparental involvement and child well-being. *Child Soc* 24:200–214
- Hagestad GO (2003) Interdependent lives and relationships in changing times: a life-course view of families and aging. In: Settersten RA Jr (ed) *Invitation to the life course. Toward new understandings of later life*. Baywood Publishing Company, Inc., New York, pp 135–159
- Hagestad GO (2006) Transfers between grandparents and grandchildren: the importance of taking a three-generation perspective. *Zeitschrift Familienforschung* 18:315–332
- Hamilton WD (1964) The genetical evolution of social behaviour (I and II). *J Theor Biol* 7:1–52
- Hank K, Buber I (2009) Grandparents caring for their grandchildren: findings from the 2004 survey of health, ageing, and retirement in Europe. *J Fam Issues* 30:53–73
- Höpfinger F, Hummel C (2006) Heranwachsende Enkelkinder und ihre Großeltern. Im Geschlechtervergleich. *Z Gerontol Geriatr* 39:33–40
- Hrdy SB (2009) *Mothers and others. The evolutionary origins of mutual understanding*. Harvard University Press, Harvard
- Kahana B, Kahana E (1970) Grandparenthood from the perspective of the developing grandchild. *Dev Psychol* 3:98–105
- Kemp CL (2007) Grandparent–grandchild ties. Reflections on continuity and change across three generations. *J Fam Issues* 28:855–881

- Laham SM, Gonsalkorale K, von Hippel W (2005) Darwinian grandparenting: preferential investment in more certain kin. *Pers Soc Psychol Bull* 31:63–72
- Lahdenperä M, Lummaa V, Helle S, Tremblay M, Russell AF (2004) Fitness benefits of prolonged post-reproductive lifespan in women. *Nature* 428:178–181
- Mayer KU (2009) New directions in life course research. *Ann Rev Soc* 35:413–433
- Mills TL, Wakeman MA, Fea CB (2001) Adult grandchildren's perceptions of emotional closeness and consensus with their maternal and paternal grandparents. *J Fam Issues* 22:427–455
- Mueller M, Elder GH (2003) Family contingencies across the generations: grandparent–grandchild relationships in holistic perspective. *J Marriage Fam* 65:404–417
- Office for National Statistics (2007) Focus on families. <http://www.ons.gov.uk/ons/rel/family-demography/focus-on-families/2007/index.html>. Accessed 7 Feb 2012
- Pashos A (2000) Does paternal uncertainty explain discriminative grandparental solicitude? A cross-cultural study in Greece and Germany. *Evol Hum Behav* 21:97–109
- Pollet TV, Nettle D, Nelissen M (2006) Contact frequencies between grandparent and grandchildren in a modern society: estimates of the impact of paternity uncertainty. *J Cult Evol Psychol* 4: 203–213
- Pollet TV, Nettle D, Nelissen M (2007) Maternal grandmothers do go the extra mile: factoring distance and lineage into differential contact with grandchildren. *Evol Psychol* 5:832–843
- Robertson JF (1975) Interaction in three generation family—parents as mediators: toward a theoretical perspective. *Int J Aging Hum Dev* 6:103–110
- Schnettler S, Steinbach A (2011) How do biological and social kinship play out within families in the U.S.? An evolutionary perspective on perceived parental care and closeness in adolescents. *Z Familienforschung* 23:173–195 (*Journal of Family Research*)
- Sear R, Coall D (2011) How much does family matter? Cooperative breeding and the demographic transition. *Popul Dev Rev* 37: 81–112
- Sear R, Mace R (2008) Who keeps children alive? A review of the effects of kin on child survival. *Evol Hum Behav* 29:1–18
- Settersten RA (2003) Propositions and controversies in life-course scholarship. In: Settersten RA Jr (ed) *Invitation to the life course: toward new understandings of later life*. Baywood, Amityville, pp 15–45
- Silverstein M, Marenco A (2001) How Americans enact the grandparent role across the family life course. *J Fam Issues* 22: 493–522
- Silverstein M, Giarrusso R, Bengtson V (2003) Grandparents and grandchildren in family systems. A socio-developmental perspective. In: Bengtson V, Lowenstein A (eds) *Global aging and challenges to families*. Aldine de Gruyter, New York, pp 75–102
- Smith MS (1991) An evolutionary perspective on grandparent–grandchild relationships. In: Smith PK (ed) *The psychology of grandparenthood*. Routledge, New York, pp 157–176
- Spitze G, Ward RA (1998) Gender variations. In: Szinovacz ME (ed) *Handbook on grandparenthood*. Greenwood Press, Westport, pp 113–127
- Stearns S (1992) *The evolution of life histories*. Oxford University Press, New York
- Tan J-P, Buchanan A, Flouri E, Attar-Schwartz S, Giggs J (2010) Filling the parenting gap? Grandparent involvement with UK adolescents. *J Fam Issues* 31:992–1015
- Tanskanen AO, Rotkirch A, Danielsbacka M (2011) Do grandparents favor granddaughters? Biased grandparental investment in UK. *Evol Hum Behav* 32:407–415
- Triado C, Villar F, Sole C, Osuna MJ, Pinazo S (2005) The meaning of grandparenthood: do adolescent grandchildren perceive the relationship and role in the same way as their grandparent do? *J Intergenerational Relationsh* 3:101–121
- Trivers RL (1972) Parental investment and sexual selection. In: Campbell BG (ed) *Sexual selection and the descent of man*, vol 1871–1971. Aldine, Chicago, pp 136–179
- Voracek M, Haubner T, Fisher ML (2008) Recent decline in nonpaternity rates: a cross-temporal meta-analysis. *Psychol Rep* 103:799–811
- Wood S, Liossis P (2007) Potentially stressful life events and emotional closeness between grandparents and adult grandchildren. *J Fam Issues* 28:380–398