

Turku Center for Welfare Research
Working Papers on Social and Economic Issues
7/2016

**Parenthood is associated with conflicts with in-
laws in Finland**

**Mirkka Danielsbacka, Antti O. Tanskanen & Anna
Rotkirch**



Turun yliopisto
University of Turku



© Copyright is held by the author(s). Working papers receive only limited review.

13.04.2016

Parenthood is associated with conflicts with in-laws in Finland

Mirkka Danielsbacka, Antti O. Tanskanen & Anna Rotkirch

Abstract

Conflicts with in-laws are a common feature of human family life, yet this phenomenon has been little studied in industrialised societies. Here we use survey data of contemporary Finns ($n=1,202$) to investigate how parenthood is associated with the likelihood of conflicts with parents and parents-in-law. Based on inclusive fitness and inverse relatedness theory, we hypothesized that (i) spouses would be less likely to report conflicts with their own parents than with their parents-in-law and (ii) conflict-proneness with own and affinal parents would be more similar among who had children compared to childless couples. Support was found for the second but not the first hypothesis. Overall, spouses reported more conflicts with their own parents than with their in-laws. Compared to childless spouses, spouses with children had a higher likelihood of conflicts with their parents-in-law, but a similar likelihood of conflicts with their own parents. Contact frequencies were related to conflict occurrence, but results were also robust after taking contact frequencies into account. Paternal grandmothers who provided more grandchild care had more conflicts with their daughters-in-law. We conclude that the inverse relatedness arising between lineages through a grandchild renders affinal relations more akin to consanguineal relations in contemporary Finland.

Introduction

Across societies, grandparents are involved in the lives of their adult children and grandchildren (Sear and Coall, 2011; Sear and Mace, 2008). These cross-generational contacts include not only extensive and various forms of help and support, but also tensions and conflicts (Lüscher, 2002; Lüscher and Pillemer, 1998; Pillemer et al., 2007; Strassmann and Garrard, 2011). The care provided by grandparents often constitutes significant help to parents of young children, but may also be a source of conflicts when grandparents are perceived as intruding too much in the life of the young family, or on the contrary as not providing enough help. Conflicts with mothers-in-law are the subject of many anecdotes and proverbs across cultures, yet to date only a few studies have investigated how parenthood affects relationships with in-laws in contemporary societies (Danielsbacka et al., 2015; Rossi and Rossi, 1990) and conflicts between these two generations have been even less explored (but see Fischer, 1983). Here, we are interested in how parenthood is associated with the occurrence of cross-generational conflicts between affinal and consanguineal kin.

Humans are cooperative breeders, so that both mother and father and their respective kin may bond with a child and invest in rearing it (Hrdy, 1999; 2009). Evolutionary theory makes several predictions about the forms of kin altruism and conflict arising from this complex constellation of two sexes, three generations and two lineages. Below, we outline the two main theories on how conflict proneness with different kin is expected to differ and how this may be associated with parenthood.

Typically, cross-generational relationships are accounted for by two reproductively relevant variables: sex-specific reproductive strategy and genetic relatedness (Euler, 2011; Euler, Hoier, & Rohde, 2009; Euler & Michalski, 2007). Sex-specific reproductive strategy relates to sex differences in parental and, by extension, grandparental investment. In humans, the child's mother typically invests most in reproduction, so that the mother and her kin become especially important for child survival and well-being (Leonetti et al., 2007). Genetic relatedness constitutes the core of Hamilton's (1964) inclusive fitness theory, which predicts that natural selection should favour investment in close kin. Other factors being equal, individuals will invest more in their close relatives than in less closely related or unrelated individuals.

In the case of human parent/in-law relations, inclusive fitness theory implies a closer relationship (e.g., more emotional closeness and altruistic helping) towards an individual's genetic kin, compared to affinal kin or non-kin. Previous studies of extended families in contemporary developed societies have found support for the assumption, showing that individuals often feel emotionally closer (e.g., Danielsbacka et al., 2015; Euler et al., 2001; Waynforth, 2011; Willson et al., 2003) and have more feelings of obligation (Rossi & Rossi, 1990) to their own parents compared to their in-laws. People also provide more assistance to their close kin compared with distant kin or non-kin (Salmon & Shackelford, 2011) and expect fewer expressions of gratitude in return (Rotkirch et al., 2014). The propensity to greater altruism towards kin remains after taking into account the higher emotional closeness usually felt towards closer kin (Korchmaros and Kenny, 2001), creating the so-called "kin bonus" in helping behaviour (Burton-Chellew and Dunbar, 2011; Danielsbacka et al., 2015).

Kin altruism as predicted by inclusive fitness theory is also often combined with kin competition, the severity of which may reduce or overrun the tendencies to altruistic helping among kin (Griffin and West 2002; Mace, 2013; Tanskanen et al., 2016). Inclusive fitness theory has been interpreted as predicting less competition and fewer conflicts with close genetic kin compared to more distant kin or non-kin (Salmon and Hehman, 2014). Confirming this prediction, Euler and colleagues (2001) found that the overall relationship quality between parent and grandparent observed and reported by the youngest generation (the grandchild generation) was better among biological kin than among in-laws. For the topic investigated here, the hypothesis derived from inclusive fitness theory predicts more conflicts with parents-in-law than with consanguinal parents. To our knowledge, no studies have yet compared the conflict proneness of spouses towards their own parents and their parents-in-law.

Inclusive fitness theory has been expanded and modified in several ways. Among them, the concept of inverse relatedness as formulated by Hughes (1988) is crucial for investigating in-law relations. Hughes (1988) theory of affinal kin argued that in-laws, who are usually not closely genetically related, become "inversely" genetically related to each other through common descendants. Affinal kin are related through their common offspring, not common ancestors. This should render the relationship an adult child has with his or her parents-in-law more akin to the relationship with his or her

own parents, especially if the third generation that creates the inverse genetic relatedness with in-laws already exists. Burton-Chellew and Dunbar (2011) found empirical support for Hughes' hypothesis in a contemporary Belgian population, in which the relationship between contact frequencies and emotional closeness was similar for in-laws and biological kin, but differed with regards to non-kin friends. Similarly, Danielsbacka et al. (2015) showed that Finnish fathers were emotionally closer to their parents-in-law compared to childless men in couples. However, the hypothesis of inverse relatedness has not been investigated with regards to conflicts among adult family generations and including comparison between couples with and without children. Based on Hughes' hypothesis of the similarity of genetic and affinal relationships and its dependence on common descendants, the relationship towards one's own parents and parents-in-law may be predicted to be more similar among couples who have children compared to those who do not have children.

This study investigates how parenthood is associated with cross-generational conflict proneness between affinal and consanguineal or genetic kin. Previously, in-law conflicts have been mainly studied in historical and traditional societies. These studies have often investigated the association between the presence of mothers-in-law and child survival or well-being (e.g., Chan et al., 2008; Lahdenperä et al., 2012; Leonetti et al., 2007; Mace 2013; Voland and Beise, 2005). We expand the field by investigating conflicts in a contemporary society and by including fathers-in-law. Taking into account gender, there are eight possible relationship dyads among child/parent and child/parent-in-law (Euler, 2011). Using survey data of younger adults from contemporary Finland, we compare couples with and without children and ask how parenthood is associated with the likelihood of reported conflicts in each of the eight dyads. Based on the theoretical framework outlined above, we have two research hypotheses. First, inclusive fitness theory (Hamilton, 1964) indicates that, while genetically closer kin are expected to be emotionally closer, more severe conflicts should occur with genetically more distant individuals. Thus our first hypothesis predicts that:

Hypothesis 1 (H1): Adult children are more likely to have conflicts with their parents-in-law than with their own parents.

Second, because affinal kin become "inversely" genetically related only after the advent of a third generation (Hughes, 1988), we expect that having (grand)children should be

associated with in-law relations, so that they would be more like the relations between genetic kin. The expected direction of the association is dependent on whether adult children have more or fewer conflicts with their own parents than with parents-in-law in the first place. Thus, if H1 holds we assume that:

Hypothesis 2a (H2a): Parents are less likely to have conflicts with their parents-in-law compared to childless couples and the difference between conflict proneness by kin type is reduced.

If H1 does not hold we assume the contrary:

Hypothesis 2b (H2b): Parents have more conflicts with their parents-in-law compared to childless couples and the difference between conflict proneness by kin type is reduced.

Data and methods

This study uses survey data from the Generational Transmissions project in Finland (Gentrans). The aim of Gentrans is to gather information on two family generations: the Finnish baby boomer generation born between 1945–1950 ($M=1947$, $SD=1.67$) (referred to as the older generation) and their adult children born between 1962–1993 ($M=1976$, $SD=5.6$) (the younger generation); the older generation is the pivot generation of the study. Statistics Finland collected two separate representative surveys in Finland (excluding the Åland islands) for the Gentrans project in spring 2012 via postal mail. Respondents from the younger generation could also respond to the questionnaire via the Internet. Only one person per household participated in the survey. This study uses only data from the younger generation, because the older generation data does not include information concerning in-law relations. The younger generation's survey reached 1,753 respondents and the response rate was 50% (see also Tanskanen et al., 2014; Tanskanen and Danielsbacka, 2014, Danielsbacka et al., 2015 who used the same data).

Contemporary Finland is a wealthy country characterised by high gender equity, dual breadwinner families and extensive welfare state support to families (Kangas and Kvist, 2013). The median age at first birth is 28.5 for women and individuals who become

parents typically have two or three children (Official Statistics of Finland, 2015). Parental leave is available until the child is 1–3 years old, after which children usually enter municipal day care. A Finnish child born today has on average three grandparents alive (Official Statistics of Finland, 2012). Grandparental support can be described as extensive, so that several grandparents are present in the grandchild’s life, but none of them to a very high degree, due to the availability of institutionalised day care (Danielsbacka et al., 2013); such extensive but “light” grandparenting is common for families in the Nordic welfare states (Hank and Buber, 2009; Igel and Szydlik, 2011).

To study conflicts with own parents and in-laws, we selected only those respondents who had a partner. This left us with 1,202 observations (women=62.6%, men=37.4%) in the sample born between 1962–1990 (M=1975, SD=5.1). Respondents had on average 3.6 parents or parents-in-law alive. For every analysis (within every dyad) we have selected only those respondents who had the concerned relative alive. For the analysis concerning Hypothesis 1, the data was reshaped to a long format, so that the observations were the original respondent’s parents and parents-in-law.

The dependent variable measures the frequencies of reported conflict between a respondent and his/her parent or in-law. The question was asked as follows: “Disagreements between close people can lead to conflicts. Have you had conflicts with him/her? How often?” and the response alternatives were: 1=Never, 2=Rarely, 3=Occasionally and 4=Often. The question was asked separately by sex and lineage. We coded the variable into two categories 0=No conflicts, 1=Conflicts. Sensitivity analyses with different cut points and a continuous variable produced similar results as the results using the binary variable, so that the results presented here may be considered robust. We also tested the results by fitting the regression models with ordered logistic regression that takes into account ordered categories (0=No conflicts, 1=Rarely, 2=Occasionally or often) without equal spacing between the categories (‘ologit’ command in Stata 13.1; see Liu, 2009). This modelling did not considerably alter the results compared to the binary analysis (results based on ordered logistic regression models are presented in Appendix Tables 1–3).

The main independent variable in the second stage of the analysis (H2a and H2b) measures whether or not the respondent had children. For the analyses, the data was split according to the eight possible adult child/parent and adult child/parent-in-law

dyads. Logistic regression was used to predict the likelihood of conflicts. The results are illustrated by calculating the predicted probabilities of conflicts by kin lineage from the logistic regression models of conflicts by parenthood status. Because in the first analysis (H1) the data are clustered within kin lineages (i.e., the data may include more than one observation from the same respondent), we used Stata’s statistical software cluster option to compute the standard errors. This method takes into account the non-independence of answers reported by the same respondent.

In the analyses we have controlled for several potentially confounding variables known to affect the relations between parents of young children and their in-laws (Danielsbacka et al., 2015; Willson et al., 2003). These variables include respondents’ age, education and health, geographical distance between respondent and parent/in-law, contact frequency with parent/in-law (0= “never”, 1= “less than once a month”, 2= “about 1–3 times a month”, 3= “once a week”, 4= “several times a week”), age of the parent/in-law, and parent’s/in-law’s health as reported by the respondent (see Table 1 and 2 for descriptive statistics).

Table 1. Descriptive statistics: Respondent characteristics (%/mean)

	Women %/mean n = 752	Men %/mean n = 450
Has children		
No (%)	23.5	31.0
Yes (%)	76.5	69.0
Year of birth, mean	1975.3	1975.1
Education		
Elementary school or less (%)	1.9	4.0
Baccalaureate (%)	4.8	9.6
Vocational school or other vocational degree (%)	15.2	25.3
Vocational college-level training (%)	16.1	12.2
University of applied science or other lower university degree (%)	31.7	23.8
Master’s degree (%)	27.0	22.0
Licentiate or doctoral degree (%)	3.5	3.1
Respondent’s health		
Very good (%)	28.6	28.7
Good (%)	61.0	55.1
Reasonable (%)	10.0	14.9
Poor (%)	0.4	1.3

[TABLE 2 ABOUT HERE]

Results

First, we studied with which kin respondents were most likely to report conflicts (Hypothesis 1). We assumed that conflict-proneness would be higher with in-laws than with consanguineal parents. The hypothesis was not supported. Figure 1 illustrates the predicted probabilities to report conflicts with parents or parents-in-law separately for women and men. Both women and men were more likely to report having had any conflicts with their own parents than with their in-laws. Predicted probabilities for conflicts were, for women: own mother = 84% (ref.), own father = 76%; OR = 0.57; $p < .001$; 95% confidence intervals (CI) lower-upper 0.45-0.72; mother-in-law = 52%; OR 0.20; $p < .001$; CI 0.15-0.26 and father-in-law = 40%; OR = 0.12; $p < .001$; CI 0.09–0.16. For men the results were as follows: own mother = 79% (ref.); own father = 82%; OR = 1.20; $p = .226$; CI 0.90–1.62; mother-in-law = 45%; OR = 0.20; $p < .001$; CI 0.15–0.28 and father-in-law = 36%; OR = 0.14; $p < .001$; CI 0.10–0.19.

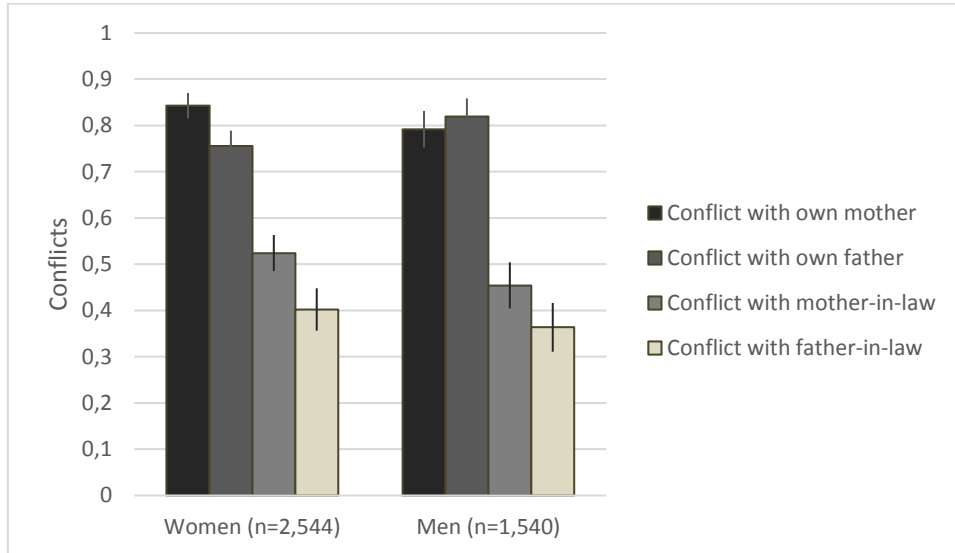


Figure 1. Women’s and men’s reported conflicts between self and mother, father, mother-in-law and father-in-law (regression-based predicted probabilities and 95% confidence intervals): Adjusted variables: age, education, and health of the respondent, whether or not the respondent has children, age of the parent/in-law, geographical distance, contacts with parent/in-law, and health of parent/in-law.

Next, we investigated the association between parenthood and the likelihood of reporting any conflicts with multivariate regressions, controlling for other factors and

separately for women and men. We assumed that having a child would be associated with similar levels of conflicts reported with a person's own parents and with parents-in-law. Because Hypothesis 1 was not supported and people reported more conflicts with consanguineal than with affinal parents, we investigated Hypothesis 2b, that parents would report more conflicts with in-laws. Figure 2 illustrates women's predicted probability to report conflicts in their relations with their parents or in-laws depending on parenthood status. Parenthood was not associated with women's probability to report conflicts with their own parents, but was significantly associated with the likelihood for conflicts with their mothers-in-law and fathers-in-law. The predicted probability for conflicts was in the case of mother-in-law: no children = 32% vs. children = 59%, OR = 3.04; $p < .001$; 95% CIs 1.99–4.65 and in the case of father-in-law: no children = 31% vs. children = 43%, OR = 1.75; $p = .017$; 95% CIs 1.10–2.78. Among mothers, more conflicts were reported with the mother-in-law than with the father-in-law, but among childless women there was no difference in conflict proneness between mother- and father-in-law. Thus, hypothesis 2b was supported among women, so that parenthood was associated with more conflicts with in-laws, resulting in a smaller difference between conflict proneness by kin type.

Figure 3 shows men's predicted probability to report conflicts in the relationship with their parents or in-laws, depending on whether or not they had children. Parenthood was not associated with men's probability for conflicts with their own parents, but was significantly associated with the likelihood for conflicts with their mothers-in-law (no children = 30% vs. children = 49%, OR = 2.29; $p = .002$; 95% CIs 1.37–3.82) and with fathers-in-law, although the latter difference was only marginally significant (no children = 26% vs. children = 37%, OR = 1.77; $p = .058$; 95% CIs 0.98–3.20). As among women, fathers reported more conflicts with their mother-in-law compared to their father-in-law, while among childless men there was no difference in conflict proneness between mother-in-law and father-in-law. Thus hypothesis 2b was supported also among men.

To see whether our results depended on how often the parties met each other, we have controlled for contact frequency in the respective dyad in the models presented in Figures 1–3. After controlling for other factors, contact frequencies were in some cases

significantly associated with the likelihood for reporting conflicts with parents and parents-in-law.

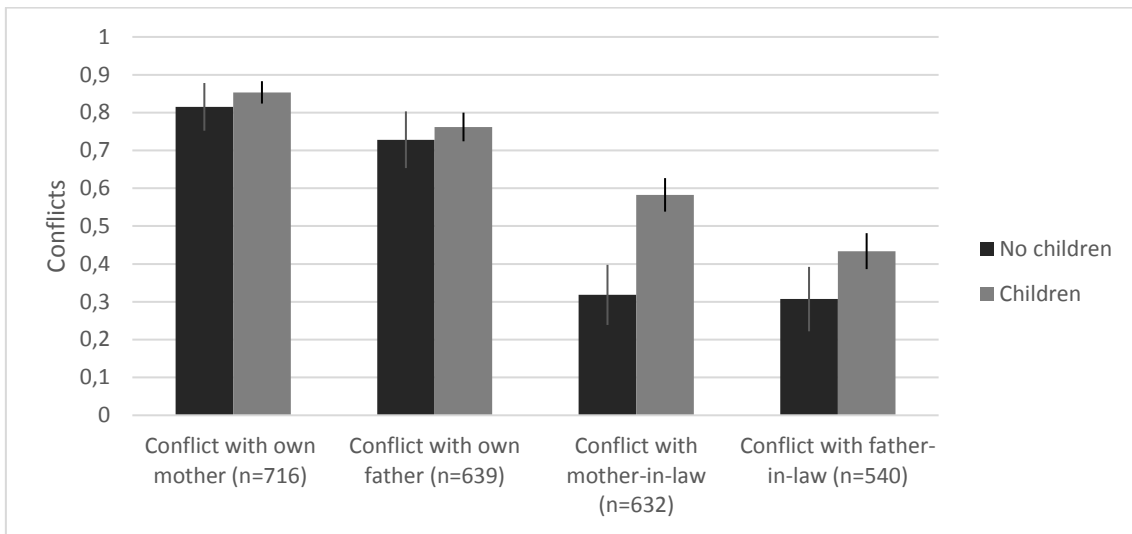


Figure 2: Women’s reported conflicts between self and mother, father, mother-in-law and father-in-law by having or not having a child/children (regression-based predicted probabilities and 95% confidence intervals): Adjusted variables: age, education, and health of the respondent, age of the parent/in-law, geographical distance, contacts with parent/in-law, and health of parent/in-law.

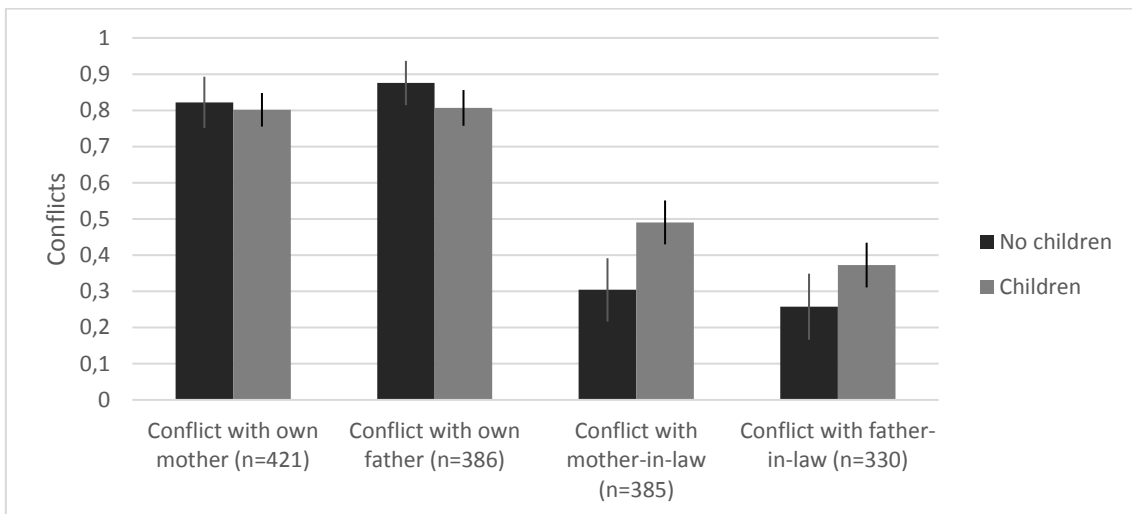


Figure 3: Men’s reported conflicts between self and mother, father, mother-in-law and father-in-law by having or not having a child/children (regression-based predicted probabilities and 95% confidence intervals): Adjusted: age of the respondent, education, health, age of the parent/in-law, geographical distance, contacts with parent/in-law, and parent’s/in-law’s health

We also investigated one possible reason for the higher number of conflicts between couples with children and the grandparental generation: the provision of child care. If

grandparents participated in child care, interactions with the child's family increased, potentially also increasing sources of tensions and conflict. We analysed whether the amount of reported received child care from grandparents was related to the likelihood of conflicts. These analyses employed the same variables as in the previous analyses, with the addition of the age of the youngest child of the respondent and the number of grandparents of the child. Grandchild age and the number of other potential providers of grandparental care may both be associated with the amount of child care provided by a particular grandparent.

Ordered logistic regression analyses which included only parent respondents ($n = 886$) showed a significant association between reported conflicts and child care for the daughter-in-law/mother-in-law dyad. The more a daughter-in-law received child care help from her mother-in-law, the more likely she was to report frequent conflicts with her (see Tables 3 and 4). As we did the analyses with binary logistic models, the same association was marginally significant ($OR = 1.18$; $p = .059$; 95% CIs 0.99–1.40) (result not shown in the Tables) indicating that for women receiving child care from mothers-in-law may not only add the number of conflicts, but also their occurrence at all.

[TABLE 3 ABOUT HERE]

[TABLE 4 ABOUT HERE]

Discussion

We tested evolutionary predictions regarding affinal kin by investigating reported conflicts towards parents and parents-in-law in contemporary Finland, studying all the eight dyadic relations between younger adults and their parents/in-laws by sex and lineage. Our first hypothesis predicted based on inclusive fitness theory (Hamilton, 1964) that younger adults should be more likely to report conflicts with their parents-in-law compared to their own parents. This hypothesis did not gain support, because both men and women were more likely to report conflicts with their own parents than with their parents-in-law. This finding is similar to recent studies of the effect of genetic relatedness on conflict proneness between siblings (Salmon and Hehman, 2015; Tanskanen et al., 2016), showing more conflicts among full than half siblings. Thus, accumulating evidence now indicates that genetically close relations are not less

conflict-prone than others, although they are typically emotionally close and quite altruistic.

Our second hypothesis was based on inclusive fitness theory as extended to in-laws (Hughes, 1988) and predicted conflict proneness between in-laws to be more similar to the parent-child relation if the respondent has children. This hypothesis was confirmed: while being a parent was not associated with the likelihood for conflicts with an individual's own parents compared to childless couples, the likelihood for conflicts with parents-in-law was substantially higher among parents. These results were similar for women and men; both reported more conflicts with their mother-in-law than their father-in-law.

Why would parents, more likely than childless couples, have conflicts with their parents-in-law? We predicted our results from the theory of inverse relatedness (Hughes, 1988). The shared reproductive interest that is created through a grandchild brings with it new reasons for grandparents to influence and interfere in the lives of other family members, which in turn may be reflected in conflict-proneness. Our findings were related to higher contact frequencies, suggesting that the existence of a grandchild makes the parents interact more with their in-laws. However, parenthood was also associated with more conflicts after taking contact frequency into account; thus, parenthood could not fully explain the results.

Women's higher parental investment and the female dominance in monitoring and investing in cross-generational family relations (Coall and Hertwig, 2010) can, in turn, explain why more conflicts appear to emerge vis-à-vis the mother-in-law than the father-in-law. A higher amount of child care provision was related to having frequent conflicts between daughter-in-law and mother-in-law. Fischer's (1983) classic study that reported that the most frequent source of irritation between daughters-in-law and mothers-in-law was focused on issues around the young children is apparently in line with our results.

Another explanation for our results could be the different function the older generation has dependent on whether or not there is a grandchild. The existence of a child makes the elderly potential providers of care to the grandchild and support to parents, creating new demands and expectations from both sides. However, this difference in relationship

dynamics associated with the parenthood and grandparenthood concerns both genetic kin and in-laws. Because conflict proneness with consanguineal parents did not differ by parental status, it cannot solely account for our results.

Our results could also reflect the fact that parenthood can cause stress and conflicts between spouses, which would in turn affect relations with the spouse's parents. Conflicting interests between two heterosexual spouses are ultimately based on male and female sex-specific reproductive strategies (e.g., Leonetti et al., 2007) and conflicts between spouses can thus extend to include the maternal and paternal lineages (Euler, 2011). Although parents of small children, in general, have a lower probability to divorce than childless couples (Kulu, 2014; Lyngstad and Jalovaara, 2010), relationship dynamics between spouses do change with the transition to parenthood. A recent study found that in contemporary Western countries, parents of small children had lower relationship satisfaction than couples without children, although this effect can partly be due to the length of the relationship rather than the transition to parenthood per se (Mitnick, Heyman, and Smith Slep, 2009). Of course, adults may also have relationship conflicts with their own parents or parents-in-law regardless of marital relationship quality. Neither does this reasoning explain why more conflicts were reported with a person's own parents than with parents-in-law. Due to lack of data in the survey used, we could not here explore the association between spousal and in-law relations, which remains an interesting topic for future research.

Among the limitations of our study is its cross-sectional nature and focus on the perceptions of a single family generation. The relationship between children-in-law and parents-in-law may vary with both time and the source of the reports. Our study did not include the experiences of the older generation. For example, in a study of Israeli daughters-in-law and mothers-in-law (Linn and Breslerman, 1996), the younger women estimated that the relationship toward mother-in-law either improved or was stable over time, whereas their mothers-in-law estimated that the relationship improved or deteriorated over time. Moreover, the daughters-in-law thought the improvement occurred as a function of detachment (they did not see each other as much as in the beginning of the relationship), whereas the mothers-in-law viewed the improvement as a function of attachment (the daughters-in-law had grown to like them more). There is a need for longitudinal studies that analyse how in-law relations vary over the life course

and for studies that investigate in-law conflicts from the perspectives of both parties involved. It would also be useful to have data on the couple's relationship quality and history. The longer a couple has been together, the more likely they are to have children and the longer history they are likely to share with their parents-in-law, which can affect conflict occurrence through the habituation effect (Voland and Beise, 2005).

Another limitation of the current study is that we do not know what kind of conflicts the respondent had in mind, or whether the nature of these conflicts differed between different dyads, or between spouses with children and childless couples. Conflicts may be more severe between in-laws than between biological kin or vice versa and their sources may differ. While we did investigate contact frequency, we could not take into account length of contacts: it is likely the length of the contact with parents and/or in-laws differs depending on parenthood status. Couples with children may spend longer periods of time together when they meet their in-laws, creating more opportunities for conflicts to occur. According to a previous American study, conflicts between older parents and adult children consist of six conflict themes: communication and interaction style; habits and lifestyle choices; child-rearing practices and values; politics, religion and ideology; work habits and orientations, and household standards or maintenance (Clarke et al., 1999). Future studies need to investigate the proximate reasons for conflicts within cross-generational relationships.

A previous study using the same data showed that emotional closeness of parents to their parents-in-law was similar (for mothers) or higher (for fathers) compared to childless women and men (Danielsbacka et al., 2015). Combined with the results presented here, we have shown with large and reliable data that parenthood appears to increase conflicts within the extended family, without lessening emotional closeness. Relational dynamics between in-laws become more "kin-like" with the arrival of a new young family generation. Inverse relatedness (Hughes, 1988) and intra-group relatedness theory (Savage et al., 2013) are likely to yield many other insights into kin and spousal dynamics in relation to fertility, provided access to appropriately detailed human family data.

References

- Burton-Chellew, M.N., & Dunbar, R.I.M. (2011). Are affines treated as biological kin? A test of Hughes's hypothesis. *Current Anthropology*, 52, 741–746. doi: 10.1086/661288.
- Chan, K.L., Brownridge, D.A., Tiwari, A., Fong, D.Y.T., & Leung, W-C. (2008). Understanding violence against Chinese women in Hong Kong: An analysis of risk factors with a special emphasis on the role of in-law conflict. *Violence Against Women*, 14, 1295–1312.
- Clarke, E.J., Preston, M., Raksin, J., and Bengtson, V.L. (1999). Types of Conflicts and Tensions Between Older Parents and Adult Children. *The Gerontologist*, 39, 261–270. doi: 10.1093/geront/39.3.261
- Coall, D.A., & Hertwig, R. (2010). Grandparental investment: Past, present, and future. *Behavioral and Brain Sciences*, 33, 1–59. doi: 10.1017/S0140525X09991105.
- Danielsbacka, M., Tanskanen, A.O., and Rotkirch, A. (2015). Impact of Genetic Relatedness and Emotional Closeness on Intergenerational Relations, *Journal of Marriage and Family*, 77, 889–907. DOI: 10.1111/jomf.12206
- Danielsbacka, M., Tanskanen, A.O, Hämäläinen, H., Pelkonen, I., Haavio-Mannila, E., Rotkirch, A., Karisto, A. & Roos, J.P. (2013). Sukupolvien vuorovaikutus. Auttaminen ja yhteydenpito suurten ikäluokkien ja heidän lastensa elämässä. [Intergenerational relations: Helping and interaction in the life of Finnish baby boomers and their adult children]. *Väestöntutkimuslaitoksen julkaisusarja D 58* (2013): 2013.
- Euler, H.A., Hoier, S. & Rohde, P.A. (2001). Relationship-specific closeness of intergenerational family ties. Findings from evolutionary psychology and implications for models of cultural transmission. *Journal of Cross-cultural Psychology*, 32, 147–158.
- Euler, H.A. (2011). Grandparents and extended kin. In Salmon, C.A. & Shackelford, T.K. (Eds.), *The Oxford Handbook of Evolutionary Family Psychology*. New York: Oxford University Press, pp. 181–210.
- Fischer, R.L. (1983). Mothers and mothers-in-law. *Journal of Marriage and Family*, 45, 187–192.
- Hank, K. & Buber, I. (2009). Grandparents caring for their grandchildren: Findings from the 2004 Survey of Health, Ageing, and Retirement in Europe. *Journal of Family Issues*, 30, 53–73.
- Hamilton, W.D. (1964). The genetical evolution of social behaviour (I and II). *Journal of Theoretical Biology*, 7, 1–52.
- Hrdy, S.B. (1999). *Mother Nature. A History of Mothers, Infants, and Natural Selection*. New York: Pantheon Books.

- Hrdy, S.B. (2009). *Mothers and Others. The Evolutionary Origins of Mutual Understanding*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Hughes, A.L. (1988). *Evolution and Human Kinship*. New York: Oxford University Press.
- Igel, C. & Szydlik, M. (2011). Grandchild care and welfare state arrangements in Europe. *Journal of European Social Policy*, 21, 210–224. doi: 10.1177/0958928711401766.
- Kangas, O. & Kvist, J. (2013). Nordic Welfare States. In: Greve, B. (Ed.) *The Routledge Handbook of the Welfare State*. London & New York: Routledge, pp. 148–160.
- Korchmaros, J.D. & Kenny, D. A. (2001). Emotional closeness as a mediator of the effect of genetic relatedness on altruism. *Psychological Science*, 12, 262–5.
- Kulu, H. (2014). Marriage duration and divorce: the seven-year itch or a lifelong itch? *Demography*, 51, 881–93.
- Mitnick, D.M., Heyman, R.E. & Smith Slep, A.M. (2009). Changes in relationship satisfaction across the transition to parenthood: a meta-analysis. *Journal of Family Psychology*, 23, 848–52. doi: 10.1037/a0017004
- Lahdenperä, M., Gillespie, D.O., Lummaa, V. & Russel, A.F. (2012). Severe intergenerational reproductive conflict and the evolution of menopause. *Ecology Letters*, 15, 1283–1290. doi: 10.1111/j.1461-0248.2012.01851.x
- Leonetti, D.L., Nath, D.C. & Hehman, N.S. (2007). In-law Conflict: Women's Reproductive Lives and the Roles of their Mothers and Husbands among the Matrilineal Khasi. *Current Anthropology*, 48, 861–890.
- Linn, R. & Breslerman, S. (1996). Women in conflict: On the moral knowledge of daughters-in-law and mothers-in-law. *Journal of Moral Education*, 25, 291–307.
- Liu, X. (2009). Ordinal regression analysis: fitting the proportional odds model using Stata, SAS and SPSS. *Journal of Modern Applied Statistical Methods*, 8, 632–645.
- Lyngstad, T.H. & Jalovaara, M. (2010). A review of the antecedents of union dissolution. *Demographic Research*, 23, 257–292.
- Lüscher, K. (2002) Intergenerational ambivalence: Further steps in theory and research, *Journal of Marriage and Family*, 64, 585–593.
- Lüscher, K. & Pillemer, K. (1998). Intergenerational ambivalence: A new approach to the study of parent-child relations in later life. *Journal of Marriage and the Family*, 60, 413–425.

- Mace, R. (2013). Cooperation and conflict between women in the family. *Evolutionary Anthropology: Issues, News, and Reviews*, 22, 251–258.
- Official Statistics of Finland (OSF) (2015). Perinatal statistics—parturients, deliveries and newborns [e-publication]. Helsinki: National Institute for Health and Welfare (THL) [referred: 29.6.2015]. Access method: http://www.stat.fi/til/syysvasy/index_en.html
- Official Statistics of Finland (OSF) (2012). Families [e-publication]. ISSN=1798-3231. Annual Review 2011. Helsinki: Statistics Finland [referred: 9.7.2015]. Access method: http://www.stat.fi/til/perh/2011/02/perh_2011_02_2012-11-09_tie_001_en.html
- Pashos, A. (2000). Does paternity uncertainty explain discriminative grandparental solicitude? A cross-cultural study in Greece and Germany. *Evolution and Human Behavior*, 21, 97–109.
- Pillemer, K., Suitor, J.J., Mock, S.E., Sabir, M., Pardo, T.B. & Sechrist, J. (2007). Capturing the complexity of intergenerational relations: Exploring ambivalence within later-life families. *Journal of Social Issues*, 63, 775–791.
- Rossi, A.S. & Rossi, P.H. (1990). *Of Human Bonding: Parent-Child Relations across The Life Course*. New York: Aldine.
- Rotkirch, A., Lyons, M., David-Barrett, T. & Jokela, M. (2014). Gratitude for help among adult friends and siblings. *Evolutionary Psychology*, 12, 673–686.
- Salmon, C. & Hehman, J. (2014). The evolutionary psychology of sibling conflict and siblicide. In Shackelford, T.K. & Hansen, R.D. (Eds.) *The Evolution of Violence*. New York, NY: Springer New York, pp. 137–157.
- Salmon, C. & Hehman, J. (2015). Evolutionary perspectives on the nature of sibling conflict: the impact of sex, relatedness, and co-residence. *Evolutionary Psychological Science*, 1, 123–129.
- Salmon, C. & Shackelford, T.K. (Eds.) (2011). *The Oxford Handbook of Evolutionary Family Psychology*. New York: Oxford University Press.
- Savage, J.L., Russell, A.F. & Johnstone, R.A. (2013). Intra-group relatedness affects parental and helper investment rules in offspring care. *Behavioral Ecology and Sociobiology*, 67, 1855–1865. doi:10.1007/s00265-013-1595-5.
- Strassmann, B.I. & Garrard, W.M. (2011). Alternatives to the grandmother hypothesis: A meta-analysis of the association between grandparental and grandchild survival in patrilineal populations. *Human Nature*, 22, 201–222.
- Sear, R. & Coall, D. (2011). How much does family matter? Cooperative breeding and the demographic transition. *Population and Development Review*, 37, 81–112. doi: 10.1111/j.1728-4457.2011.00379.x.
- Sear, R. & Mace, R. (2008). Who keeps children alive? A review of the effects of kin on child survival. *Evolution and Human Behavior*, 29, 1–18.

- Tanskanen, A.O. & Danielsbacka, M. (2014). Genetic relatedness predicts contact frequencies with siblings, nieces and nephews: results from the Generational Transmissions in Finland surveys. *Personality and Individual Differences*, 69, 5–11. doi:10.1016/j.paid.2014.04.034.
- Tanskanen, A.O., Danielsbacka, M., Jokela, M. & Rotkirch, A. (2016). Sibling conflicts in full- and half-sibling households in the UK. *Journal of Biosocial Science*, 48, DOI: <http://dx.doi.org/10.1017/S0021932016000043>.
- Tanskanen, A.O., Danielsbacka, M. & Rotkirch, A. (2014). Multi-partner fertility is associated with lower grandparental investment from in-laws in Finland. *Advances in Life Course Research*, 22, 41–48. doi:10.1016/j.alcr.2014.04.003.
- Waynforth, D. (2011). Grandparental investment and reproductive decisions in the longitudinal 1970 British cohort study. *Proceedings of the Royal Society B: Biological Sciences*, 279, 1155–60. DOI: 10.1098/rspb.2011.1424.
- Griffin, A. & West, S.A. (2002). Kin selection: fact and fiction. *Trends in Ecology & Evolution*, 17, 15–21. doi:10.1016/S0169-5347(01)02355-2.
- Willson, A.E. Shuey, K.M. & Elder, G.H. (2003). Ambivalence in the relationship of adult children to aging parents and in-laws. *Journal of Marriage and Family*, 65, 1055–1072. doi: 10.1111/j.1741-3737.2003.01055.x.
- Voland, E. & Beise, J. (2005). “The husband’s mother is the devil in house” Data on the impact of the mother-in-law on stillbirth mortality in Historical Krummhörn (1750–1874) and some thoughts on the evolution of postgenerative female life. In Voland, E. Chasiotis, A. & Schiefenhövel, W. (Eds.) *Grandmotherhood: The Evolutionary Significance Of The Second Half of Female Life*. Rutgers University Press, pp. 239–255

Tables in the text

Table 2. Descriptive statistics: Reported conflicts between own parents and parents-in-law and other parent and parent-in-law variables (%/mean): Dyadic analyses include only respondents with the relative in question alive

	Women				Men			
	Mother %/mean n = 716	Father %/mean n = 639	Mother-in- law %/mean n = 632	Father-in- law %/mean n = 540	Mother %/mean n = 421	Father %/mean n = 386	Mother-in- law %/mean n = 385	Father-in- law %/mean n = 330
Have had conflicts								
Never (%)	15.5	24.6	47.8	59.6	19.2	17.1	56.6	66.1
Rarely (%)	55.0	53.1	37.7	30.4	62.2	62.2	33.0	28.2
Occasionally (%)	23.7	19.1	11.7	7.8	15.9	17.4	8.8	4.9
Often (%)	5.7	3.3	2.9	2.4	2.6	3.4	1.6	0.9
Parent's/in-law's year of birth, mean	1948.5	1946.9	1947.1	1945.3	1948.4	1946.5	1949.5	1948.2
Geographical distance (km), mean	133.1	154.1	215	239.8	145.8	153.3	229.2	225.7
Contact frequency, mean	3.3	2.6	2.3	2	2.8	2.7	2.2	2
Parent's/in-law's health (%)								
Very good	7.2	4.7	7.2	4.1	4.3	6.2	6.2	7.6
Good	48.5	43.8	45.5	39.0	47.9	37.0	47.3	40.5
Reasonable	35.1	39.8	33.5	40.1	40.3	44.7	34.6	41.1
Poor	7.4	10.3	11.0	13.3	6.4	10.3	10.3	8.8
Very poor	1.8	1.6	2.7	3.5	1.2	1.8	1.6	2.1

Table 3. Women's conflicts with parent/parent-in-law by child care received and control variables: ordered logistic regression analyses (Coeff. and 95% CIs): Only those respondents who have children

	Mother			Father			Mother-in-law			Father-in-law		
	n = 521	95% CIs		n = 454	95% CIs		n = 457	95% CIs		n = 386	95% CIs	
	Coeff.	lower	upper	Coeff.	lower	upper	Coeff.	lower	upper	Coeff.	lower	upper
Child care received	-0.08	-0.21	0.05	-0.02	-0.16	0.13	0.19*	0.03	0.34	-0.06	-0.24	0.13
Year of birth of the youngest child of the respondent	0.04	-0.01	0.09	0.05	0.00	0.11	-0.06*	-0.12	-0.005	-0.04	-0.10	0.03
Number of grandparents	-0.13	-0.39	0.13	-0.04	-0.36	0.28	-0.02	-0.35	0.32	0.35	-0.15	0.85
Year of birth of the respondent	0.02	-0.03	0.08	0.01	-0.05	0.06	0.04	-0.02	0.10	-0.04	-0.11	0.02
Respondent education	-0.04	-0.18	0.10	-0.01	-0.16	0.13	0.14	0.00	0.29	-0.05	-0.21	0.11
Respondent reported health	0.23	-0.06	0.52	0.26	-0.06	0.58	0.43**	0.12	0.73	0.06	-0.29	0.41
Parent's/in-law's year of birth	-0.03	-0.10	0.03	0.01	-0.06	0.08	0.00	-0.03	0.03	0.05*	0.01	0.08
Parent's/in-law's health (reported by the respondent)	0.22*	0.003	0.43	0.22*	0.00	0.45	0.14	-0.07	0.36	0.11	-0.13	0.35
Geographical distance (km)	0.0003	-0.0005	0.001	0.0002	-0.0003	0.0007	0.0002	-0.0001	0.0005	0.0002	-0.0001	0.0004
Contacts	-0.11	-0.34	0.12	-0.13	-0.35	0.09	-0.21*	-0.42	-0.01	0.30**	0.08	0.51

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

Table 4. Men's conflicts with parent/parent-in-law by child care received and control variables: ordered logistic regression analyses (Coeff. and 95% CIs): Only those respondents who have children

	Mother			Father			Mother-in-law			Father-in-law		
	n = 278	95% CIs		n = 241	95% CIs		n = 248	95% CIs		n = 211	95% CIs	
	Coeff.	lower	upper	Coeff.	lower	upper	Coeff.	lower	upper	Coeff.	lower	upper
Child care received	0.13	-0.09	0.34	0.002	-0.25	0.25	0.07	-0.14	0.27	0.08	-0.18	0.33
Year of birth of the youngest child of the respondent	-0.03	-0.11	0.04	0.07	-0.06	0.10	-0.01	-0.09	0.06	-0.11*	-0.20	-0.01
Number of grandparents	-0.39	-0.84	0.05	-0.11	-0.66	0.44	-0.27	-0.81	0.28	0.60	-0.20	1.40
Year of birth of the respondent	0.07*	0.004	0.14	-0.03	-0.11	0.05	-0.02	-0.09	0.05	-0.04	-0.12	0.05
Respondent education	-0.09	-0.26	0.07	-0.10	-0.28	0.07	-0.10	-0.26	0.07	0.12	-0.07	0.31
Respondent reported health	0.06	-0.30	0.42	0.07	-0.34	0.48	0.19	-0.19	0.56	0.34	-0.10	0.77
Parent's/in-law's year of birth	-0.006	-0.11	0.10	0.05	-0.03	0.13	0.03	-0.01	0.07	0.03	-0.01	0.08
Parent's/in-law's health (reported by the respondent)	0.24	-0.12	0.60	0.49**	0.18	0.81	0.15	-0.17	0.46	0.18	-0.18	0.54
Geographical distance (km)	-0.0007	-0.002	0.0008	-0.0007	-0.002	0.0009	-0.0003	-0.0009	0.0004	-0.0004	-0.001	0.0005
Contacts	-0.38*	-0.69	-0.07	-0.09	-0.39	0.20	-0.05	-0.31	0.21	0.21	-0.09	0.51

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

Appendix Table 1. Women's and men's reported conflicts between self and mother, father, mother-in-law and father-in-law: Ordered regression analyses and 95% CIs

	Women	95% CIs		Men	95% CIs	
	n = 2,544	lower	upper	n = 1,540	lower	upper
Conflict with						
Mother (ref.)						
Father	-0.46***	-0.63	-0.29	0.13	-0.07	0.34
Mother-in-law	-1.39***	-1.60	-1.18	-1.42***	-1.70	-1.14
Father-in-law	-1.94***	-2.21	-1.68	-1.87***	-2.18	-1.57
Respondent is a parent						
No (ref.)						
Yes	0.42**	0.18	0.66	0.23	-0.04	0.51
Respondent's year of birth	0.0001	-0.02	0.02	-0.01	-0.04	0.02
Respondent's health	0.19*	0.03	0.35	0.19	-0.02	0.40
Respondent's education	0.02	-0.05	0.10	-0.04	-0.13	0.04
Parent's/in-law's year of birth	-0.004	-0.02	0.02	0.01	-0.01	0.04
Parent's/in-law's health	0.14**	0.04	0.24	0.25***	0.12	0.39
Geographical distance	0.0002	-0.00002	0.00037	-0.0003*	-0.00067	-0.00003
Contact frequency	-0.03	-0.13	0.07	0.07	-0.06	0.21

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

Appendix Table 2. Women's conflicts with parent/parent-in-law by having or not having a child/children and control variables: Ordered regression analyses and 95% CIs

	Mother			Father			Mother-in-law			Father-in-law		
	n = 716	95% CIs lower	upper	n = 639	95% CIs lower	upper	n = 632	95% CIs lower	upper	n = 540	95% CIs lower	upper
Respondent is a parent												
No (ref.)												
Yes	0.27	-0.09	0.62	-0.06	-0.44	0.32	1.14***	0.73	1.56	0.57*	0.12	1.03
Respondent's year of birth	0.004	-0.03	0.04	0.01	-0.02	0.05	0.01	-0.03	0.05	-0.04*	-0.09	0.00
Respondent's health	0.25*	0.01	0.50	0.21	-0.05	0.47	0.28*	0.02	0.54	-0.07	-0.36	0.23
Respondent's education	0.01	-0.10	0.12	0.05	-0.06	0.17	0.06	-0.06	0.18	-0.02	-0.15	0.12
Parent's/in-law's year of birth	0.002	-0.05	0.05	0.02	-0.03	0.07	-0.01	-0.04	0.01	0.02	-0.01	0.05
Parent's/in-law's health	0.22*	0.03	0.40	0.19	-0.002	0.38	0.08	-0.10	0.26	0.06	-0.14	0.27
Geographical distance	0.00004	-0.00038	0.00046	0.0002	-0.00014	0.001	0.0003*	0.00003	0.0005	0.0001	-0.0002	0.0003
Contact frequency	-0.25**	-0.43	-0.08	-0.07	-0.22	0.08	-0.06	-0.22	0.09	0.26**	0.09	0.43

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

Appendix Table 3. Men's conflicts with parent/parent-in-law by having or not having a child/children and control variables: Ordered regression analyses 95% CIs

	Mother			Father			Mother-in-law			Father-in-law		
	n = 421	95% CIs lower	upper	n = 386	95% CIs lower	upper	n = 385	95% CIs lower	upper	n = 330	95% CIs lower	upper
Respondent is a parent												
No (ref.)												
Yes	0.15	-0.31	0.60	-0.40	-0.88	0.08	0.84**	0.33	1.34	0.55	-0.04	1.14
Respondent's year of birth	0.02	-0.02	0.06	-0.03	-0.07	0.02	-0.03	-0.08	0.02	-0.02	-0.07	0.03
Respondent's health	0.13	-0.17	0.43	0.08	-0.24	0.39	0.27	-0.04	0.58	0.34	-0.02	0.69
Respondent's education	-0.07	-0.20	0.07	-0.06	-0.20	0.07	-0.03	-0.17	0.11	0.01	-0.15	0.17
Parent's/in-law's year of birth	-0.02	-0.09	0.06	0.04	-0.03	0.10	0.04*	0.002	0.07	0.01	-0.03	0.05
Parent's/in-law's health	0.19	-0.09	0.47	0.42**	0.17	0.68	0.24	-0.01	0.49	0.19	-0.10	0.48
Geographical distance	-0.0002	-0.0007	0.0004	-0.0003	-0.0008	0.0003	-0.001	-0.0012	0.0002	-0.001	-0.0021	0.0004
Contact frequency	-0.22	-0.44	0.00	-0.02	-0.23	0.18	0.12	-0.08	0.32	0.32**	0.08	0.56

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