PARENTHOOD STATUS AND RELATIONSHIP QUALITY BETWEEN SIBLINGS

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Abstract: Previous studies have shown that the existence of a third generation tends to influence family relations between adult children and their parents. However, there is a lack of studies investigating whether being a parent is associated with relationship quality between adult siblings. Using the Generational Transmissions in Finland survey (n = 1,530 younger adults), we investigate whether parenthood status is associated with sibling relationship quality measured by contact frequency, emotional closeness and conflicts. We found that females who are mothers themselves reported more contact with sisters compared to childless women. We also found signs of decreased likelihood of conflict among sisters with children. Fathers reported more contact than childless men with their childless sisters. In contrast, compared to childless men, fathers reported less contact and a lower level of emotional closeness to their brothers. The results are discussed with reference to life course and shared reproductive interests perspectives.

Keywords: Childlessness, parenthood, sibling relations

INTRODUCTION

Sibling relationships are the most long lasting social ties across the human life course (Cicirelli, 1995). When individuals experience important life events, siblings are the ones who are often present. Life course events are often experienced approximately at the same time, and some life events may significantly affect sibling relations (Voorpostel & Bliezner, 2008). For instance, studies have shown that in the case of severe illness or death of a family member, siblings provide safety nets to each other, meaning that during these unfortunate events, the relationship quality between siblings may improve (Cicirelli, 1995; Pollet & Hoben, 2011). However, there is a lack of studies investigating how family addition, which obviously is one of the most important life events, shapes sibling relationships. In the present study, we compare the relationship quality of siblings who are parents and siblings who are childless using data of younger adults in Finland. We analyze whether individuals who have children and/or whose siblings have children have a better relationship quality compared to childless individuals with childless siblings.

We measure sibling relationship quality by three factors, namely, contact frequencies, emotional closeness and conflicts. These different relationship quality indicators concentrate on the different aspects of sibling relations and all these measures are analyzed because previous studies have shown that sibling relations include not only altruistic helping and emotional support but also competition and conflict (Bedford, 1989; Connidis, 2007). Increased reports of contact frequencies and emotional closeness may indicate better and increased conflicts worst relationships quality among siblings (Salmon & Hehman, 2014). Conflicts between siblings tend to be more common in childhood and adolescence, when siblings live together and may compete over parental resources (e.g., Dunn, 2004; Tanskanen at al., 2016), while in adulthood siblings often provide important support to each other (e.g., Connidis, 1992; White, 2001). This notwithstanding, sibling conflicts do

not entirely end when children grow up but also exist in adulthood (Tanskanen et al., 2016). In this study we investigate three questions (Q):

> Q1: Do respondents who have children and/or whose siblings have children have more or less contacts compared to childless respondents with childless siblings?
>
> Q2: Are respondents who have children and/or whose siblings have children more or less emotionally close to each other compared to childless respondents with childless siblings?
>
> Q2: Do respondents who have children and/or whose siblings have children have more or less conflicts than childless respondents with childless siblings?

The life course perspective acknowledges that there is interdependency between life course careers among siblings, meaning that the lives of siblings tend to be linked together (Cox & Paley, 1997; Elder, 1994). A life course event an individual experience is thus likely to influence the live of his or her sibling too (Voorpostel & Bliezner, 2008). Thus, it is worth to assume that when one sibling experiences a family addition it influences relationship quality between siblings. However, the influence may be different between different sibling pairs. Siblings who are more similar to each other may feel more connected, while the more variation there is among siblings the less connected they could be (Voorpostel, van der Lippe, Dykstra & Flap, 2007). According to parenthood status, younger adults who are parents themselves may have more shared interests with their siblings with children compared to siblings without children. Similarly, childless individuals may be closer with their childless siblings. Thus, similar sibling pairs (either both have children or both are childless) could have closer relation with each other compared to "mixed" sibling pairs.

Another potential explanation is based on shared reproductive interests among siblings because many of the emotions embedded in family relations are strongly related to the existence of a common offspring (Hughes, 1988; Salmon & Shackelford, 2011). For instance, two previous studies showed that when a child arrives there is an increase in the daughter–mother relationship quality (Danielsbacka et al., 2015; Fischer, 1983). When a niece or nephew arrives the shared reproductive interests between siblings increase, which in turn may encourage individuals to invest resources in their siblings with children. Although, the birth of a niece or nephew increase the shared reproductive interests among siblings with and without children, those with children may be forced to invest rather in their own children than that of their siblings. Because time and other resources of any individual are always limited, parents may not have similar opportunities to invest in their kin compared to childless individuals, who in turn can have more free time that provides an opportunity to involve in their kin. If this is the case, there should be stronger relationship quality among parent–childless sibling pairs (i.e., one sibling has children and other is childless) compared to parent–parent or childless–childless pairs.

In addition, the gender of individual as well as that of the sibling may influence sibling relationship quality. Studies have shown that same-sex siblings tend to have closer relations with each other compared to mixed gender sibling pairs and female-female pairs are closest of all sibling pairs (Michalski & Euler, 2008). Moreover, family scholars have consistently shown that women tend to be "kin keepers" that is to say the ones who interact with relatives more than men (e.g., Bracke et al., 2008; Rossi & Rossi, 1990). These gender based differences mean that it is important to study relationship quality between different sister–brother categories in a separate manner.

In all analyses, we control for several potential confounding factors that are shown to be associated with sibling relationship quality in previous studies. The age of an individual and sibling have been shown to correlate with sibling contacts (Tanskanen & Danielsbacka, 2014). Perhaps even more important factor is the age difference between siblings. When the age difference increases, the closeness between siblings tends to decrease (Pollet, 2007). The birth order could be a relevant factor, as firstborns are shown to have more contacts with siblings than laterborns (Pollet & Nettle, 2007; Salmon, 1999, 2003). Moreover, when the total number of siblings increases, the time one can spend with one specific sibling may decrease (Michalski & Euler, 2008). One of the most robust findings in previous literature is that when the geographical distance between siblings increases the amount of contact decreases (e.g., Pollet, 2007; Tanskanen & Danielsbacka, 2014). Finally, marital status and socioeconomic position may influence sibling relationship quality (e.g., Tanskanen et al., 2016; White, 2001).

METHOD

We use the Generational Transmissions in Finland (Gentrans) survey data. The aim of Gentrans is to gather longitudinal information on two generations: the Finnish baby boomer generation born between 1945 and 1950 and their adult children born between 1964 and 1993. Only one person per household participated in the study. This study only uses the younger generation data collected in 2012 by Statistics Finland via regular mail. During the data collection in 2012, respondents were approximately 36 years old (between 19 and 50) (see Danielsbacka et al., 2013; Tanskanen & Danielsbacka, 2016 for more detailed data description). For our analytical sample, we have selected those respondents who have at least one sister or brother. Only genetically related sibling pairs are included. These selections left us with a study sample consisting of 1,530 respondents.

Dependent variables indicate the relationship quality of siblings measured by contact frequency, emotional closeness and conflicts. In the questionnaire, respondents were asked via a five-point scale (from 0 = never to 4 = several times a week) to report how often they have had contact with their siblings either personally, by phone or by internet during the last 12 months. Emotional closeness was measured by asking respondents how close they feel to their siblings using a five-point scale (from 0 = very distant, to 4 = very close). In the case of conflicts the respondents were asked how often they have had conflicts with sibling. Respondents reported conflicts with each of their siblings on a scale of 0 = never to 3 = often. For the analysis, we dichotomized the sibling conflict variable as 0 = never and 1 = at least sometimes, as this variable was not normally distributed, thus the analyses with continuous variables would not have been performed properly. Sensitivity analyses conducted with continuous variables produced similar results (not shown) as the analyses with the dichotomized variables, thus, the loss of information appears to have been small. The ratings of contact frequency, emotional closeness and conflicts were asked separately for the respondents' four oldest siblings. For the purposes of the analyses, the data were reshaped into a long format, allowing the observations to represent the siblings of the original respondents. This resulted in a total of 2,402 observations from the data.

The main independent variable measures parenthood status of respondents and siblings. For the analyses we constructed four dyadic sibling pair variables based on gender and parenthood status. These variables include four categories: 1) both are childless, 2) respondents are childless but siblings have children, 3) respondents have children but siblings are childless and 4) both have children. First variable includes female respondents with sisters and second variable female respondents with brothers. Third variable includes male respondents with sisters and fourth variable male respondents with brothers. In all analyses group "both are childless" is used as a reference category and other categories are compared to it.

A multilevel linear regression is used to study sibling contacts and emotional closeness. In the case of sibling conflicts, we used multilevel logistic regression analysis. Multilevel models are used because our data is clustered by siblings (i.e., the sample may include several observations from one respondent) and thus we need method that take into account the non-independence of sibling relationship quality measures reported by the respondents. We have illustrated the results by calculating the adjusted means and predicted probabilities (with 95% confidence intervals) from the regression models.

For all analyses, we control for several potential confounding factors. These are respondents' year of birth, marital status, education, financial situation, number of siblings and birth order. Sibling's year of birth and financial situation as well as age difference and geographical distance between siblings are also controlled. With the exception of the respondent's birth year, number of siblings, sibling's birth year, age difference between siblings and geographical distance between siblings, all independent variables were categorical and were transformed into dummy variables. Descriptive statistics are presented in Table 1.

Table 1 somewhere here

RESULTS

First, we provided pairwise correlations between sibling relationship quality indicators. There was a somewhat high positive correlation between contact and emotional closeness ($r = 0.58$, $p < 0.001$) and a very low positive correlation between contact and conflict ($r = 0.09$, $p < 0.001$). Moreover,

there was a very low negative correlation between emotional closeness and conflict (-0.09, $p < 0.001$).

Women

Table 2 (Models 1 and 2) shows the results concerning women's contact frequency with sisters and brothers. These results are illustrated in Figure 1. Compared to "childless women with childless sisters", "mothers with sisters with children" have more contacts. A somewhat similar effect was found in sister–brother pairs, although the difference between groups "both are childless" and "both have children" was only marginally significant. In addition, we found that mothers with childless brothers reported marginally significantly more contacts than did childless women with childless brothers.

Table 2 somewhere here

Figure 1 somewhere here

Based on results shown in Table 3 (Models 1 and 2) and illustrated in Figure 2, mothers with sisters with children reported marginally significantly more emotionally closer relationships compared to childless women with childless sisters. However, we were unable to find even marginally significant associations in the case of sister–brother dyads.

Table 3 somewhere here

Figure 2 somewhere here

Next, Table 4 (Models 1 and 2) shows and Figure 3 illustrates that compared to the "both are childless" group, "respondents are childless, sibling have children" and "both have children" groups had a significantly marginally lower likelihood of conflicts. However, there were no significant differences between sister–brother pairs.

Table 4 somewhere here

Figure 3 somewhere here

Men

Table 2 (Models 3 and 4) shows and Figure 4 illustrates that fathers with childless sisters reported more contacts than the group "both are childless". Moreover, childless men with brothers with children had less contact compared to the group "both are childless".

Figure 4 somewhere here

As Table 3 (Models 3 and 4) shows and Figure 5 illustrates, there were no significant differences in reported emotional closeness between the reference group "both are childless" and other groups based on parenthood status when brother-sister pairs were investigated. However, Figure 5 shows that childless men with brothers with children reported lower levels of emotional closeness than the group "both are childless".

Figure 5 somewhere here

Next, Table 4 (Models 3 and 4) and Figure 6 present results concerning sibling conflict in men. There were no significant associations in the case of brother–sister pairs. In the case of the brother–brother pair group, "respondents have children and siblings are childless" had a marginally significantly lower probability of conflict than the group "both are childless".

Figure 6 somewhere here

Associations between covariates and sibling relationship quality

Finally, the results concerning the associations between control variables and sibling relationship quality was investigated (results not shown). These analyses included all respondents (number of respondents = 1,325, number of observations = 2,402). First, contact between siblings was studied (the overall model: n = 2,402, adjusted R2 = 0.16). We found that younger respondents (β = -0.02, SE = 0.01, $p < 0.001$) and respondents with younger siblings had more contact (β = -0.02, SE = 0.004, $p < 0.001$). When respondents' number of siblings (β = -0.08, SE = 0.01, $p < 0.001$), age difference (β = -0.03, SE = 0.005, $p < 0.001$) and geographical distance (β = -0.26, SE = 0.02, $p < 0.001$) increased, the amount of contact decreased.

Next, emotional closeness between siblings was investigated (the overall model: n = 2,402, adjusted R2 = 0.06). Respondents with younger siblings were emotionally closer with them (β = -0.02, SE = 0.004, $p < 0.001$). When age difference (β = -0.03, SE = 0.004, $p < 0.001$) and geographical distance (β = -0.06, SE = 0.02, $p < 0.001$) increased, emotional closeness decreased. Respondents with "lower degree of tertiary education" (β = 0.28, SE = 0.13, $p < 0.033$) were emotionally closer with siblings compared to the group "primary or secondary level education" (ref). Respondents

were emotionally closer to wealthier siblings (low income = ref.; middle income: β = 0.16, SE = 0.05, p = 0.001; comfortably off or wealthy β = 0.17, SE = 0.05, p = 0.001).

Finally, sibling conflict was analyzed (the overall model: n = 2,402, Nagelkerke R2 = 0.09). Based on marital status, the groups "cohabitation" (OR = 0.51, SE = 0.10, p = < 0.001) and "other" (OR = 0.52, SE = 0.15, p < 0.025) had a lower likelihood for conflict compared to the "unmarried" group (ref). When the number of siblings (OR = 0.90, SE = 0.03, p = 0.002) and age difference between siblings (OR = 0.91, SE = 0.01, p < 0.001) decreases, the odds for conflict also decrease. Finally, regarding financial status, those respondents whose siblings were comfortably well-off or wealthy (OR = 0.75, SE = 0.10, p = 0.028) had a lower probability of conflict than those whose siblings had low incomes (ref).

DISCUSSION

In the present study, we have analyzed whether parenthood status is associated with sibling relationship quality measured by contact frequency, emotional closeness and conflicts. We found that female respondents who both have own children and nieces/nephews via sisters reported an increased amount of contact with sisters. Moreover, we found some evidence that motherhood was associated with a lower likelihood of conflict among sisters. In the case of male respondents, fathers reported more contact with their childless sisters than childless men. However, fathers reported less contact with their brothers than childless men. Finally, in several cases, we did not find significant differences between sibling pairs.

The finding that mother–mother sibling pairs had more contacts with each other compared to other constellations is in line with the life course perspective prediction that life situation similarity

explains the relationships quality among siblings. Previous studies have shown that sister–sister pairs are typically the closest of all sibling pairs, and women usually invest more resources in their sibling's children compared to men (Michalski & Euler, 2008). Family scholars have explained women's strong involvement in kin by gender-specific reproductive interests. In other words, due to biological, psychological and socio-cultural reasons, women are typically kin keepers, that is, the ones who interact with kin (Bracke et al., 2008; Trivers, 1972). Women's role as kin keepers may also explain our finding that the existence of an offspring tends to improve the relationship quality between sisters but not between brothers. Because women typically are the ones who take main responsibility of small children, women may also show higher interest in interacting with kin compared to men. Thus, it is likely that women need more child related support and advice from kin than men do, which in turn may make women even closer to their kin after a child arrives.

In fact, we found that having a child may even deteriorate the relationship quality between brothers, as mentioned above. One reason for this finding could be that having a child makes both spouses closer to maternal than paternal kin. In line with this argument, a previous study by Danielsbacka and colleagues (2015) showed that fathers reported a better relationship quality with their parents-in-law than childless men. Because of the mothers' higher responsibility towards children, the maternal kin advantage is found to exist in kin relations (e.g., Chan & Elder, 2000). However, in the present study we also found that there was no significant difference in emotional closeness between childless brothers and in those brothers who both have children. This indicates, in line with the predictions based on the life course perspective, that life situation similarity may be the most important factor explaining the relationship quality between brothers. While the relationship quality between sisters could be related to parenthood status, this may not be the case among brothers. Thus, relationship quality between sisters and between brothers may be influenced by somewhat different factors.

Finally, the finding that fathers rather than childless men had more contact with their childless sisters is in accordance with the prediction derived from the shared reproductive interests perspective, indicating that when a child arrives women may start to invest more in their brothers. Moreover, in line with the shared reproductive interests perspective mother–mother pairs had less conflict than childless sister–sister pairs. This is also in line with prediction derived from the shared reproductive interests perspective. Although, other results of the present study do not provide convincing evidence for this perspective, previous studies have shown that childless individuals tend to invest more resources in their nieces and nephews compared to parents (Pollet et al., 2006; Tanskanen, 2014). Thus, future studies are needed to compare relationships quality of childless individuals with siblings and siblings' children more accurately.

The present study has several strengths. We have used large-scale data of younger adults that allowed us to study different aspects of sibling relationship quality (i.e., contacts and emotional closeness as well as conflicts). In addition, we were able to control for several potential confounding factors that are shown to associate with sibling relationship quality in previous studies. Perhaps the most important limitation of the current study is the cross-sectional nature of the data used, which prevents us from claiming causality. Thus, in the future, it is important to study whether the advent of a child improves sibling relationship quality using longitudinal data. Another limitation is that with this data we were unable to study within family effects because of the low number of different sibling dyads from same families. Thus, we call for future studies to investigate these potential within family effects.

Since to date there has been a lack of studies investigating the association between parenthood status and adult sibling relationship quality. However, two previous studies have shown that

relationship quality between daughters and mothers tends to improve when there is a third generation (Danielsbacka et al., 2015; Fischer, 1983). In the present study, we found that when offspring exists, the relationship quality between sisters tends to improve. However, in the case of brothers, having a child may even worsen the relationship quality. Thus, comparing the results of the present study and the previous ones concerning daughter–mother relationships, we can conclude that the existence of a child tends to improve matrilineal advantage in kin relations.

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Table 1. Descriptive statistics (n and %/mean)

	Women			Men		
	n	%/mean	SD	n	%/mean	SD
Respondent's birth year	982	1976	5.58	548	1976	5.63
Respondent's marital status						
Unmarried	185	18.8		110	20.1	
Cohabitation	217	22.1		146	26.6	
Married	529	53.9		277	50.6	
Other	51	5.2		15	2.7	
Respondent's education						
Primary or lower secondary level (ref)	25	2.6		28	5.1	
Upper secondary level	374	38.1		273	49.8	
Lower degree level tertiary education	301	30.7		118	21.5	
Higher degree level tertiary education or doctoral degree	282	28.7		129	23.5	
Respondent's perceived financial condition						
Low-income (ref)	315	32.1		136	24.8	
Middle-income	484	49.3		271	49.5	
Comfortably off or wealthy	183	18.6		141	25.7	
Respondent's number of siblings	982	2.0	1.50	548	2.0	1.58
Respondent's birth order						
Firstborns (ref)	384	39.1		233	42.5	
Laterborns	598	60.9		315	57.5	
Sibling's birth year	1573	1976	6.32	829	1976	6.64
Sibling's perceived financial condition						
Low-income (ref)	381	24.2		189	22.8	
Middle-income	678	43.1		366	44.2	
Comfortably off or wealthy	514	32.7		274	33.1	
Age difference between respondent and sibling	1573 6.11761	6.1	4.33	829	6.3	4.8

(Table 1 continued)

Geographical distance between respondent and sibling				
Less than 1 km (ref)	29	1.8	16	1.9
1 to 5 km	115	7.3	47	5.7
5 to 25 km	412	26.2	227	27.4
25 to 100 km	312	19.8	152	18.3
100 to 500 km	517	32.9	304	36.7
More than 500 km	188	12.0	83	10.0

Notes. Basic data: Respondent's birth year, marital status, education, financial condition, number of sibling and birth order; Long format data: sibling's birth year, age difference and geographical distance.

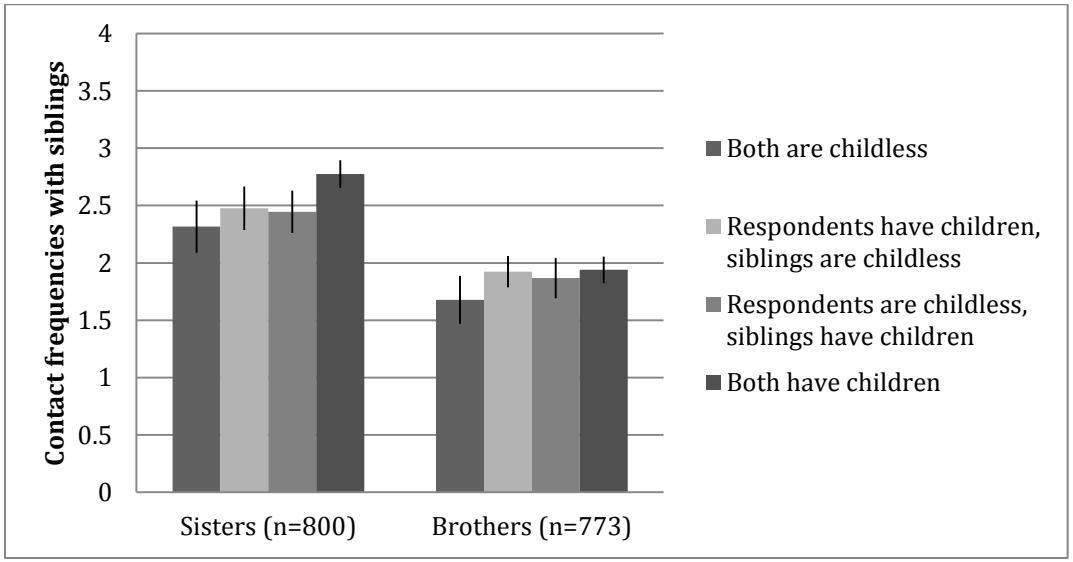

Figure 1. Women's contact frequency with sisters and brothers (adjusted means and 95% confidence intervals)

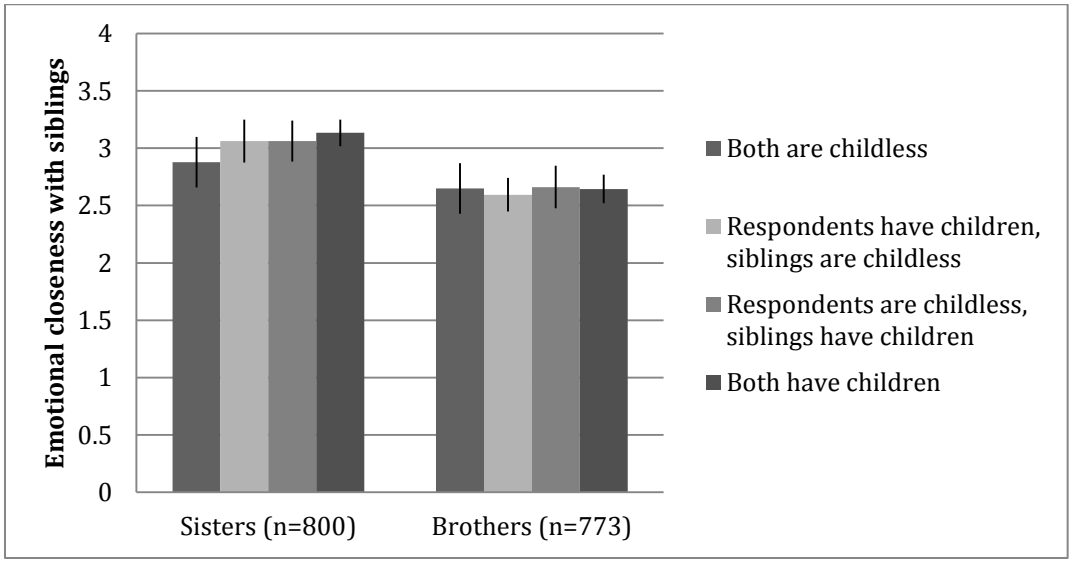

Figure 2. Women's emotional closeness with sisters and brothers (adjusted means and 95% confidence intervals)

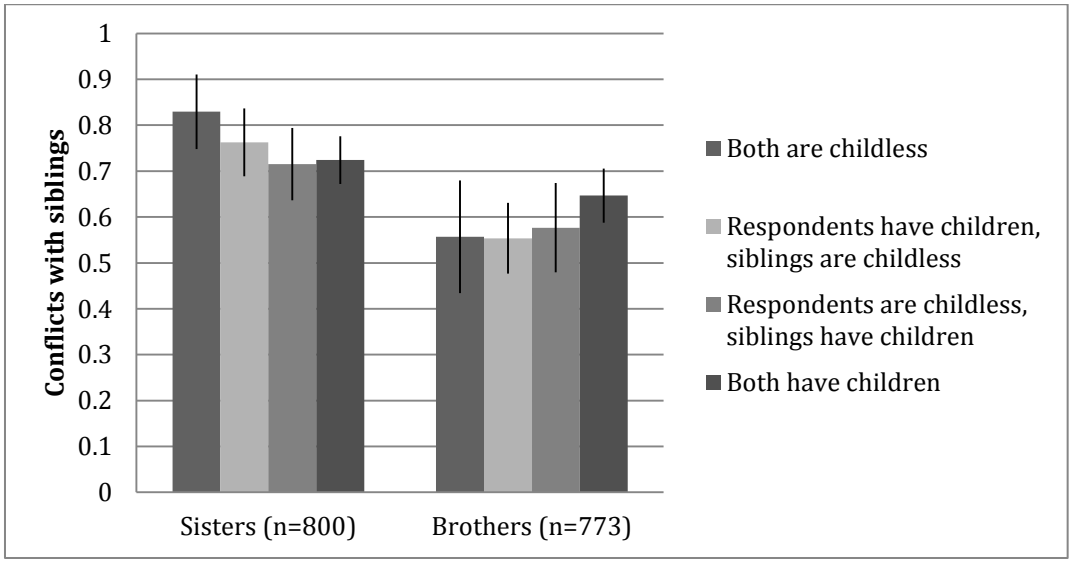

Figure 3. Women's conflicts with sisters and brothers (predicted probabilities and 95% confidence intervals)

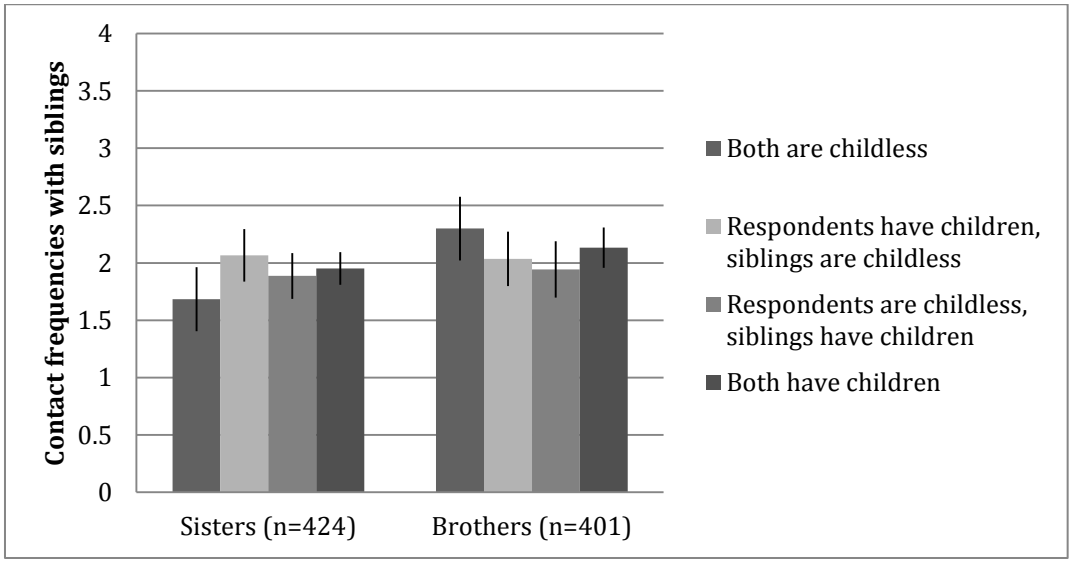

Figure 4. Men's contact frequency with sisters and brothers (adjusted means and 95% confidence intervals)

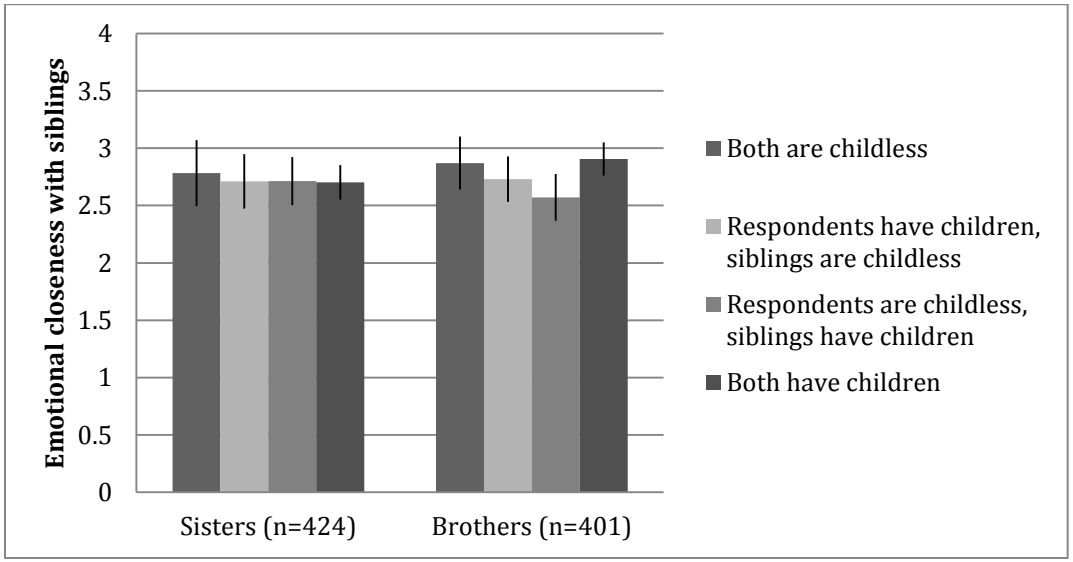

Figure 5. Men's emotional closeness with sisters and brothers (adjusted means and 95% confidence intervals)

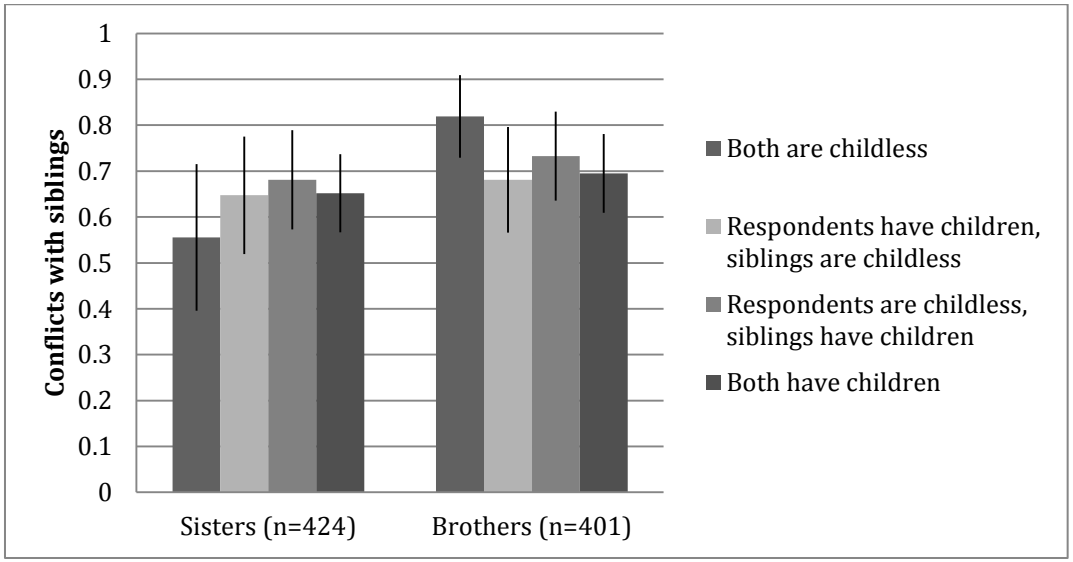

Figure 6. Men's conflicts with sisters and brothers (predicted probabilities and 95% confidence intervals)

Table 2. Contact frequencies with sisters and brothers

	Model 1 Women with sisters			Model 2 Women with brothers			Model 3 Men with sisters			Model 4 Men with brothers		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Both are childless	ref			ref			ref			ref		
Respondents have children, siblings are childless	0.16	0.15	0.290	0.24	0.13	0.074	0.38	0.19	0.043	-0.26	0.19	0.173
Respondents are childless, siblings have children	0.13	0.13	0.328	0.19	0.12	0.105	0.20	0.15	0.175	-0.36	0.16	0.027
Both have children	0.46	0.14	0.001	0.26	0.14	0.055	0.27	0.17	0.123	-0.17	0.18	0.367
n	800			773			424			401		
Adjusted R2	0.18			0.19			0.16			0.17		

Table 3. Emotional closeness with sisters and brothers

	Model 1 Women with sisters			Model 2 Women with brothers			Model 3 Men with sisters			Model 4 Men with brothers		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Both are childless	ref			ref			ref			ref		
Respondents have children, siblings are childless	0.19	0.15	0.205	-0.06	0.14	0.694	-0.07	0.20	0.704	-0.14	0.16	0.380
Respondents are childless, siblings have children	0.19	0.13	0.145	0.01	0.12	0.922	-0.07	0.15	0.638	-0.30	0.13	0.027
Both have children	0.26	0.14	0.060	0.00	0.14	0.973	-0.08	0.18	0.651	-0.04	0.15	0.812
n	800			773			424			401		
Adjusted R2	0.04			0.08			0.03			0.09		

Table 4. Conflicts with sisters and brothers

	Model 1 Women with sisters			Model 2 Women with brothers			Model 3 Men with sisters			Model 4 Men with brothers		
	OR	SE	p	OR	SE	p	OR	SE	p	OR	SE	p
Both are childless	ref			ref			ref			ref		
Respondents have children, siblings are childless	0.64	0.25	0.248	0.98	0.34	0.964	1.52	0.77	0.405	0.44	0.21	0.081
Respondents are childless, siblings have children	0.49	0.18	0.046	1.10	0.34	0.767	1.80	0.69	0.128	0.57	0.24	0.191
Both have children	0.51	0.19	0.078	1.53	0.55	0.237	1.55	0.72	0.342	0.47	0.22	0.102
n	800			773			424			401		
Nagelkerke R2	0.11			0.16			0.13			0.14		