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Research Article

Does it take a village to raise a child? The buffering effect of relationships with relatives for parental life satisfaction

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Abstract

BACKGROUND
Strong relationships with relatives may alleviate the consequences of stressful experiences, but the evidence documenting such 'buffering effect' during parenthood is scarce.

OBJECTIVE
This paper investigated the buffering effect of relationships with relatives during parenthood in Switzerland. We tested whether relationships with relatives (network size, frequency of contact, and availability of practical and emotional support) were activated in response to parenthood, and if people who had stronger relationships with their relatives experienced more positive trajectories of life satisfaction during parenthood.

METHODS
We used Swiss Household Panel data for the years 2000–2011, and fixed effect regression models.

RESULTS
The birth of a first child was associated with an increase in mothers' contact with non-resident relatives. Moreover, parents with at least two children who had better access to support from relatives experienced more increase and less decline in life satisfaction during parenthood than parents who had less access to relatives' support.

CONCLUSIONS
Our study suggests that the support of relatives is a resource for parents having two or more children and that it improves the experience of parenthood even in a relatively wealthy society.

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CONTRIBUTION

This is the first paper to demonstrate that relationships with relatives diversify the effect of parenthood on life satisfaction. Moreover, it suggests that weak relationships with relatives may lower parent's life satisfaction and limit fertility, especially at higher parities.

1. Introduction

The saying "it takes a village to raise a child" suggests that not all the burden of raising children needs to rest on parental shoulders. Cooperation and the support of community, be it neighbors, relatives, or others, may make parenthood better, perhaps easier or less of a strain. This is relevant for contemporary developed societies, where fertility rates are predominantly low and the positive link between parenthood and life satisfaction is rarely found (e.g., Clark et al. 2008; Hansen 2012; Pollmann-Schult 2014). Parents, especially of young children, are tired, sleep deprived, and stressed (Umberson, Pudrovska, and Reczek 2010; Evenson and Simon 2005), they experience financial strain (Stanca 2012) and time pressures (Pollmann-Schult 2014). Childcare, an activity only slightly more enjoyable than housework (Kahneman et al. 2004), is in conflict with parents' leisure, freedom, work demands, and romantic relationships (Lyubomirsky and Boehm 2010; Twenge, Campbell, and Foster 2003; Angeles 2010; Nomaguchi and Milkie 2003).

A plausible remedy for the burdens of parenthood is the support of social networks. The 'buffering hypothesis' postulates that social support, from family or other sources, may alleviate the negative consequences of difficult experiences (Cohen 1985; Thoits 1982). Thus, people surrounded by a network available to provide support may derive more life satisfaction from parenthood than people who are socially isolated or cannot count on support from their networks. However, the role of social support for life satisfaction of parents remains underexplored.

This paper contributes to filling this gap by examining whether strong relationships with relatives act as a buffer that protects parental life satisfaction. In this paper we define strong relationships by referring to four criteria: network size, contact frequency, and availability of practical and emotional support. Throughout the paper, the term "strong relationships" refers to above median size of network of relatives, above median frequency of contact with relatives, or above median availability of practical or emotional support from relatives. We focus on two related aspects of the buffering effect. First, we investigate if networks of relatives, frequency of contacts with relatives, or availability of their support increase in response to parenthood. In other words, we test whether relationships with relatives become stronger after people have children. Second, we assess whether

people who declare stronger relationships with relatives experience more positive trajectories of life satisfaction during parenthood.

1.1 Parenthood and life satisfaction

Today parenthood is largely a choice, and is typically considered an important experience. However, the literature has failed to document a consistently positive effect of parenthood on life satisfaction (for a review see: Hansen 2012). Some analyses demonstrated that parents were less happy than childless people (e.g., Stanca 2012; Margolis and Myrskylä 2011), whereas others showed a positive (Aassve, Goisis, and Sironi 2012), or a null correlation (Qian and Knoester, 2015; for children under the age of six: Vanassche, Swicegood, and Matthijs, 2013).

The results on parenthood and life satisfaction may be divergent because studies in this field were performed with various data and methods. In contrast, studies analyzing changes in parental life satisfaction with panel data has provided a consistent picture (Clark et al. 2008; Clark and Georgellis 2013; Frijters, Johnston, and Shields 2011; Baetschmann, Staub, and Studer 2012; Myrskylä and Margolis 2014; Rizzi and Mikucka 2015; Mikucka 2016). They documented that first-time births, and, to a lesser extent, subsequent births, are periods of increased life satisfaction, especially for women. They are preceded by 'anticipation effect', which means that the increase in life satisfaction occurs one or two years before a birth (Clark et al. 2008; Frijters, Johnston, and Shields 2011; Myrskylä and Margolis 2014; Rizzi and Mikucka 2015; Anusic, Yap, and Lucas 2014). Subsequently, after a birth, the life satisfaction of parents gradually declines (Clark et al. 2008; Clark and Georgellis 2013; Frijters, Johnston, and Shields 2011; Myrskylä and Margolis 2014; Anusic, Yap, and Lucas 2014), which is consistent with the description of parenthood as a difficult experience.

The trajectories of life satisfaction levels during parenthood differ across groups of parents. For example, Galatzer-Levy et al. (2011) showed that the well-being of the majority of parents did not change in response to birth, 7% experienced a sustained decrease, and 4% experienced a strong increase. This may reflect personal preferences for parenthood (Kravdal 2014), but also the ability to cope with its challenges. Indeed, married and older people typically derive more life satisfaction from parenthood than do single and poorer people (Myrskylä and Margolis 2014). Such people may be better prepared for the demands of parenthood, such as financial costs (Stanca 2012; Pollmann-Schult 2014) and constraints on parental time (Pollmann-Schult 2014; Evenson and Simon 2005). In this paper we investigate whether strong relationships with relatives also help parents face the challenges of parenthood.

1.2 Parenthood and support from relatives

Families provide support to parents of young children, mainly by offering childcare, housework, advice and information, as well as material and financial help (Chan and Ermisch 2011; Chan 2009; Coall and Hertwig 2010; Bengtson 2001; Hank and Buber 2009). The literature showed that the support of relatives was activated in response to critical, difficult events (Eggebeen and Davey 1998; Silverstein, Gans, and Yang 2006; Schoeni 2002). Family relationships were more stable than friendships or work and community networks (Wellman et al. 1997), and they were often strong, supportive, and reciprocal (Munch, McPherson, and Smith-Lovin 1997). Thus, the network of relatives may prove an important source of support during difficult periods.

Part of the literature showed that transition to parenthood intensified the relationships with relatives. For example, analyses of US data documented that contacts of new parents with family members increased temporarily after a birth (Bost et al. 2002; Belsky and Rovine 1984). In the same period, the non-family networks tended to decline, and networks of relatives temporarily dominated the social life of parents (e.g., relatives constituted 70% of networks of parents having 3-year-old children; Munch, McPherson, and Smith-Lovin 1997). However, some other studies showed that family networks were not affected by parenthood. For example, parenthood had no effect on the relationships (contact frequency, network size, and support) of relatives in Switzerland (Kalmijn 2012). Similarly, in a study using US data, the size of parental networks was stable during the period up to 24 months after a birth (Bost et al. 2002).

In this context, gender differences are important. Support networks of men and women systematically differ, and relatives make a larger share of women's than of men's social networks (Moore 1990). Also, parenthood seems to affect women's networks more than men's – for example, having a child aged 3 or 4 limits the size of the social networks of women and the frequency of their social contacts, but it has no effect on the size of the social networks of men (Munch, McPherson, and Smith-Lovin 1997).

1.3 Buffering effect of support from relatives

Consistent with the 'buffering hypothesis' (Cohen 1985; Thoits 1982) relationships with relatives may alleviate the negative effects of difficult events (e.g., for unemployment, see Mikucka 2014). They may also protect against the loss of life satisfaction often experienced during parenthood.

Only a handful of analyses documented that social support moderated the relationship between parenthood and life satisfaction. Some studies provided indirect evidence by showing that the support of grandparents facilitated employment of mothers (especially those with lower earning potential, see Dimova and Wolff 2008; Gray 2005), and that access to informal childcare increased the probability of entering parenthood (Hank

and Kreyenfeld 2003). Similarly, having at least one parent alive increased the chances of having a child (Del Boca 2002)

The analysis by Bost et al. (2002) directly investigated the buffering effect of parental networks for 137 couples residing in rural North Carolina. They showed that parents having less frequent contact with relatives reported higher levels of adjustment (which comprised a positive attitude toward life, enjoying the company of others, and feeling able to initiate activities and carry them through) than parents having more frequent contact with relatives. The results run in the opposite direction for the size of networks: parents with larger family networks reported higher levels of adjustment than parents with smaller networks. This suggests that contact with relatives may be endogenous to the need of support: parents who experienced problems or felt insecure might be more inclined to geek frequent contact with relatives.

1.4 The Swiss context

Switzerland, a country with a fertility rate of 1.52 children per woman (OECD 2010), stands out for low availability of childcare (e.g., 8.5% of three-year-old children were enrolled, vs. 68% in the European Union (OECD 2010)), and the spendings on childcare and preschool programs are the lowest of all the OECD countries (0.2% of GDP (OECD 2010)). Not surprisingly, childcare heavily burdens household budgets in Switzerland (about 50% vs. 11%, which is the OECD average (OECD 2010)). Additionally, the 14-week-long maternity leave in Switzerland is one of the shortest in OECD countries, and the country does not offer paternity or parental leave at all (OECD 2010), despite the media interest in the topic (Valarino and Bernardi 2010). The main instrument for the reconciliation of work and family life is women's part-time work (Levy et al. 2006; Widmer and Ritschard 2009): 45.6% of women work less than 30 hours per week in a primary job (OECD 2010).

Parents in Switzerland are usually relatively old (only 1/3 of mothers have their first child before the age of 30, see Valarino and Bernardi 2010) and births out of wedlock are rare (Le Goff and Ryser 2010), which suggests that most parents are economically well prepared for parenthood. However, as Switzerland does not provide strong welfare support for parenthood, relatives may play an important role in supporting parents (Hank and Buber 2009; Jappens and Van Bavel 2012; Lewis, Campbell, and Huerta 2008), making Switzerland an interesting case for studying the buffering effect of family networks.

1.5 Current analysis

The goal of this study is to investigate the buffering effect of strong relationships with relatives for parental life satisfaction. We focus on two aspects of the buffering mechanism.

First, we investigate whether relationships with relatives become stronger in response to parenthood.

Hypothesis 1. Parenthood correlates with an increase in size of relatives' network, frequency of contact with relatives, availability of practical support, and/or availability of emotional support.

In our analysis, we capture the changing strength of relationships with relatives during various stages of parenthood: from a birth, through a care-intense stage, and later, until a child is 12 years old. Previous studies suggested that relationships with relatives were strongest during a care-intense stage of parenthood (i.e., when children were 3–4 years old: Munch, McPherson, and Smith-Lovin 1997), which is consistent with the idea that relationships with relatives intensify in response to parental need. This leads us to formulate a supplementary hypothesis.

Hypothesis 1A. Relationships with relatives become stronger after a birth and remain strong during an initial care-intense stage of parenthood; during subsequent period the parental relationships with relatives become weaker.

Moreover, we recognize that the dynamics of relationships with relatives may be different for the first and for subsequent children; therefore, we separately model the changes occurring when people have their first, second, and third child. As is consistent with the buffering mechanism, we expect that relationships with relatives intensify in response to parental needs. These needs might increase with the number of children; however, due to economies of scale, this increase is likely smaller at higher parities.

Hypothesis 1B. Each birth intensifies relationships with relatives, but the effect is smaller at higher parities.

This part of our analysis partly replicates the study by Kalmijn (2012), who found no evidence that relationships with relatives change during parenthood. Our work extends the scope of this analysis by differentiating between children of various parities, introducing detailed age groups, and allowing for anticipation effects.

As a second aspect of the buffering mechanism, we investigate whether the strength of relationships with relatives changes the correlation between parenthood and life satisfaction.

Hypothesis 2. Parents who have stronger relationships with relatives experience a greater increase (or a smaller decline) of life satisfaction during parenthood than parents who have weaker relationships with relatives.

We frame the problem in terms of changes experienced during parenthood, thus we can refer to previous studies which investigated the dynamics of life satisfaction during par-

enthood (such as Clark et al. 2008; Clark and Georgellis 2013; Frijters, Johnston, and Shields 2011; Baetschmann, Staub, and Studer 2012; Myrskylä and Margolis 2014; Rizzi and Mikucka 2015; Mikucka 2016). Also, in this case we formulate supplementary hypotheses, on the basis of the assumption that the buffering effect of relationships and support is stronger when the parental need for help is greater.

Hypothesis 2A. The moderating effect of relationships with relatives is stronger during an initial care-intense stage of parenthood than during a later stage of parenthood.

Hypothesis 2B. The moderating effect of relationships with relatives increases with each birth; however, the increase is smaller at higher parities.

2. Data and method

2.1 Data

We use data from the Swiss Household Panel (SHP), which observes social change, in particular the dynamics of changing living conditions, in the population of Switzerland.

The survey started in 1999 with a stratified random sample of private households from the Swiss telephone directory (which had about 95% coverage rate). The sample was stratified by major geographic regions in proportion to the number of households and represents the population of individuals living in private households in Switzerland (Voorpostel et al. 2015). In 2004, a refreshment sample was initiated to compensate for the erosion of the original 1999 sample. SHP follows the respondents and their children, and also since 2007, also respondents' cohabitants who leave the original household, until death or institutionalisation (Voorpostel et al. 2015). Attrition in SHP is somewhat higher than in other large European panel studies (Lipps 2007), and it is higher among the young, the males, and the socially and politically excluded people (Lipps 2007). However, as the response patterns are largely random, the risk of nonresponse bias in SHP is mild (Voorpostel 2009).

Currently, 16 waves of SHP are available. However, data on life satisfaction and relationships with relatives were recorded only during waves 2–12. This limits our analysis to period 2000–2011, i.e., 11 waves of observation for the main sample and seven waves for the refreshment sample. Data were collected annually using computer-assisted telephone interviewing (CATI).

We limited our sample to women aged 25–50 years and men who were 25–60 years during the survey in order to analyze a sample of those who could probably have a child under the age of 13. This sample consisted of almost 11,000 people and 49,000 observa-

tions. 54% of our sample were childless, 14% had a single child, 23% had two children, and 9% had three or more children. The intervals between births were typically short: among parents having at least two children, in 51% of the cases a second birth occurred within two years after a first, and in 76% of the cases, within three years. The intervals between second and third birth were typically longer: in 39% of the cases a third birth occurred within two years after a second birth, and in 76% of the cases, within four years.

2.2 Measures

2.2.1 Life satisfaction

Life satisfaction is assessed with the question: *"In general, how satisfied are you with your life if 0 means 'not at all satisfied' and 10 means 'completely satisfied'?"* The variable approximates a normal distribution, is negatively skewed, and peaks at the value of 8, which is both its overall mean and median.

2.2.2 Relationships with relatives

Because previous results showed that the stability of some aspects of relationships may coexist with the change of other aspects (Kalmijn 2012; Bost et al. 2002), we analyze four various measures of the strength of relationships with relatives: size of network, frequency of contact, availability of practical support, and availability of emotional support.

- Size of network is assessed with the question *"With how many relatives living outside of your household are you on good terms and enjoy a close relationship?"*
- Frequency of contact is measured with the question *"How frequent are your contacts with these relatives? (If variable according to the person involved, talk about the relative with whom the contacts are more frequent. Include telephone contacts.)"* The answers are expressed in number of contacts per month.
- Practical support is assessed with the question: *"If necessary, in your opinion, to what extent can these relatives or your children who do not live in your household provide you with practical help (this means concrete help or useful advice), 0 means 'not at all' and 10 'a great deal'? (Even people who do not need any help should consider possible ways in which they could get support. If some relatives can help a great deal and others not at all, indicate 'a great deal'. Practical help = e.g., doing the shopping for them when sick, taking them to the doctor or giving useful advice in case of problems or when looking for specific information.)"*
- Emotional support is measured with the question: *"To what extent can these relatives or these children be available in case of need and show understanding, by*

> *talking with you for example, 0 means 'not at all' and 10 'a great deal'? (Even people who do not need any help should consider possible ways in which they could get support. If some relatives can help a great deal and others not at all, indicate 'a great deal.')"*

Note that these data do not allow us to specify relatives mentioned by respondents; we do not know if they are the respondent's parents, in-laws, sibling, or other people. If parents are alive, they are likely to be included among non-resident relatives, because in Switzerland co-residence with parents or parents-in-law is rare. For example, in wave 2 of SHP, only 2.6% of households included persons other than partners and children.

The data on practical and emotional support are particularly suited for the analysis of the buffering effect, because a buffering mechanism is most consistently found when the measures of support refer to the availability of support rather than to support actually provided (Wethington and Kessler 1986). Indeed, part of the support actually provided tends to remain unnoticed by the recipients (Bolger, Zuckerman, and Kessler 2000). Note however, that our measure of availability of practical support may refer to temporary availability to help in emergency cases rather than a commitment to regular help. It is possible that the regular help may be of greater importance for parents than help in emergency cases; thus, our measure may underestimate the relationship between availability of practical help and parental life satisfaction.

Note also that the frequency of contact cannot be directly interpreted in terms of support available to parents, as it may also reflect contact triggered by factors other than parental need for help, for example, the need to provide help to relatives. Thus, the use of frequency of contact in this analysis assumes that more frequent contact with relatives indicates a closer relationship, which may translate into more frequent exchange of information between parents and their relatives, and which is a precondition for receiving or providing support.

We use the information on relationships with relatives in two ways. First, in the analysis of how the relationships change in response to parenthood, we use information on changes experienced by people over time, that is, we model the within-individual variation of relationships with relatives. Second, in the analysis of the buffering effect of relationships with relatives, we use time-invariant measures to capture differences between individuals. To this end, we divide respondents into (time invariant) 'stronger relationships' and 'weaker relationships' groups: we classify respondents whose average (over all waves) relationships with relatives are equal to or higher than the median as 'stronger relationships', whereas the respondents whose average relationships with relatives are under the median enter the 'weaker relationships' categories. The median cut-off values are: 5.5 for network size, 4 for contact frequency, 7 for practical support, and 7.9 for emotional support. Note that such classification implies that people classified as having "weaker re-

lationships" do not necessarily have weak relationships with relatives, but rather "less strong" ones.

2.2.3 Ages of children

Ages of children are coded with a set of dummy variables, marking the periods (years) from three years before a birth up to a child's age of 12 years. The period of four or more years before a birth serves as a reference category. The years immediately before birth (for example, one or two years before) should not be used as a reference category in the analysis of life satisfaction, because happiness in this period is elevated (due to anticipation effect, i.e., the effect of unobserved variables relevant for birth, such as pregnancy, setting up a new household, or career improvement). Therefore, we choose the earlier period as a reference category.

In the analysis of relationships with relatives (number of relatives, frequency of contact, practical and emotional support) an anticipation effect could also exist. For example, the career improvement of a man can limit his time availability and reduce contact with relatives, while increasing likelihood of a new birth due to greater financial resources. Because a potential anticipation effect exists for all the dependent variables in our analysis, we consistently keep the period of four or more years before birth as reference category.

2.2.4 Control variables

We control for factors whose changes are likely to affect the subjective well-being and social networks of respondents. We account for the changes in parental age (linear and quadratic components), marital status (dichotomous categories for never married, married, and divorced or separated, plus variables marking the year of marriage and the year of divorce, see: Clark et al. 2008), co-residence with responent's or spouse's parents (in the model of relationships' change), satisfaction with own health, household income (yearly net household income, equivalized using SKOS scale, expressed in thousands of Swiss francs, see: Guggisberg, Häni, and Fleury 2013), and respondent's unemployment (Winkelmann and Winkelmann 1998). We also include dummies for waves (waves 2–3; waves 4–6, waves 7–9 as a reference; and waves 10–12) to control for period effects such as changing economic conditions or policies. Moreover, in the analysis of parental life satisfaction, we account for support received from the partner, friends, neighbors, and colleagues. These variables are constructed as an average of emotional and practical support; if a respondent does not have a network of a given type, we re-code their values into the lowest level of support.

Furthermore, in a supplementary analysis we include time-invariant variables: education (dichotomous variables for primary, secondary, and tertiary education), average household income (expressed in relation to the wave-specific median), cohort of birth (dichotomous variables for cohorts born 1950–59, 1960–69, and 1970 or later), being a

parent, age at first birth (expressed in years), and migration status (four categories resulting from crossing the nationality [Swiss vs. other passport] with the language spoken at home [one of Swiss languages vs. other language]).

Table 1 presents details of sample size and distribution of the variables. The following Table 2 presents how frequently parents and childless men and women belong to the 'strong relationships' rather than to the 'weak relationships' groups.

2.3 Statistical method

This analysis rests on fixed effect models for panel data. Fixed effect models use the information on changes in the independent variables (in our case, aging of children) to predict changes in the dependent variable (in our case, relationships with relatives and life satisfaction). The focus on a change rather than on the absolute levels of a dependent variable restricts the variance available for estimation, but it accurately documents how a transition to parenthood and changing ages of children affect relationships with relatives and life satisfaction. Fixed effect models control for the time-invariant unobserved heterogeneity of individuals, such as genetic differences, personality traits, or the baseline level of happiness (Allison 2009). Moreover, the possibility of controlling for individual fixed effects partly resolves selection issues (Clarke et al. 2010).

Recognizing that the dynamics of both dependent variables may differ with parity and with parent's gender, we estimate separate models for a first, second, and third child, and we stratify the analysis by gender. Separate models for men and women were used in previous research on parenthood and social networks (Kalmijn 2012), but accounting for different parities is a novel aspect of our approach.

2.3.1 Ages of children, ages of parents, historical time

Our goal is to estimate the dynamics of relationships and life satisfaction which is associated with parenthood. However, the changes associated with aging of a child are inevitably related to aging of a parent and progress of historical time. In this paper, to empirically distinguish between these three processes (time, aging of parents and aging of a child), we include a control group in the estimation sample, i.e., we include in the analysis not only people who experience the transitions of interest, but also people who could, but who did not experience the specific transitions (as recommended by: Brüderl and Ludwig 2014). A similar technique was used by Anusic, Yap, and Lucas (2014), who controlled for age of parents by including in the analysis a comparison group of childless people.

The sample consists of two groups. The first one includes people who experience the transition into parenthood or aging of a child. This group comprises parents whose children of specified parity are aged 12 or younger, as well as people who will in the

Table 1: Sample characteristics

	Women						Men					
	mean	s.d.	min	max	N	N(id)	mean	s.d.	min	max	N	N(id)
Time-varying variables:												
size of network of relatives	7.20	6.61	0	200	17811	3682	6.93	6.71	0	200	18684	3824
freq. of contact with relat. (month)	8.51	9.62	0	396	17796	3679	5.74	7.03	0	120	18666	3818
practical support from relatives	7.31	2.65	0	10	17756	3659	6.55	2.80	0	10	18564	3807
emotional support from relatives	7.92	2.28	0	10	17737	3654	7.22	2.58	0	10	18540	3798
life satisfaction	7.96	1.42	0	10	17925	3725	7.88	1.39	0	10	18822	3875
age of child 1	11.94	6.63	0	32	14336	2501	13.47	7.81	0	39	15522	2563
age of child 2	10.12	5.88	0	29	10854	1761	11.42	6.98	0	36	11646	1802
age of child 3	7.17	3.95	0	23	3210	504	7.33	4.27	0	27	3171	513
single	0.24	0.43	0	1	22035	4916	0.25	0.43	0	1	27108	5996
divorced or separated	0.09	0.29	0	1	22002	4907	0.08	0.26	0	1	27075	5983
widowed	0.01	0.09	0	1	22035	4916	0.01	0.08	0	1	27108	5996
married	0.64	0.48	0	1	22035	4916	0.65	0.48	0	1	27108	5996
year of divorce	0.01	0.08	0	1	22035	4916	0.00	0.06	0	1	27108	5996
year of marriage	0.01	0.12	0	1	22035	4916	0.01	0.12	0	1	27108	5996
co-reside with grandparents	0.02	0.13	0	1	22035	4916	0.02	0.14	0	1	27108	5996
satisfaction with health	8.08	1.75	0	10	17920	3726	8.03	1.66	0	10	18818	3875
hh income equivalized	50.15	49.43	-0	2581	22035	4916	52.97	52.29	-0	2581	27108	5996
unemployed	0.01	0.11	0	1	21999	4892	0.02	0.12	0	1	27076	5973
age	38.64	6.97	25	50	22035	4916	42.82	9.59	25	60	27108	5996
waves 2–3 (2000–02)	0.20	0.40	0	1	22035	4916	0.20	0.40	0	1	27108	5996
waves 4–6 (2002–05)	0.27	0.45	0	1	22035	4916	0.27	0.45	0	1	27108	5996
waves 7–9 (2005–08)	0.27	0.44	0	1	22035	4916	0.27	0.44	0	1	27108	5996
waves 10-12 (2008–11)	0.25	0.43	0	1	22035	4916	0.26	0.44	0	1	27108	5996
support from partner	7.71	2.82	0	10	16703	3608	7.99	2.77	0	10	17656	3739
support from friends	7.68	2.10	0	10	17815	3683	7.06	2.26	0	10	18633	3806
support from neighbours	4.73	3.46	0	10	17616	3641	4.13	3.23	0	10	18449	3742
support from colleagues	3.83	3.39	0	10	22035	4916	3.05	3.23	0	10	27108	5996
Time-invariant variables:												
large network of relatives	0.45	0.50	0	1		4916	0.39	0.49	0	1		5996
frequent contact with relatives	0.62	0.48	0	1		4916	0.42	0.49	0	1		5996
high practical support from relatives	0.55	0.50	0	1		4916	0.37	0.48	0	1		5996
high emotional support from relatives	0.50	0.50	0	1		4916	0.33	0.47	0	1		5996
primary education	0.61	0.49	0	1		4916						
secondary education	0.20	0.40	0	1		4885						
tertiary education	0.19	0.39	0	1		4885						
household income	1.13	0.85	-0	21		4916						
born 1950–59	0.25	0.43	0	1		4916						
born 1960–69	0.38	0.49	0	1		4916						
born 1970+	0.37	0.48	0	1		4916						
ever a parent	0.61	0.49	0	1		4916						
age at 1st birth	28.21	4.74	0	48		2864						
Swiss passport and language	0.77	0.42	0	1		4916						
other passport and language	0.05	0.22	0	1		4916						
Swiss passport, other language	0.10	0.30	0	1		4916						
other passport, Swiss language	0.08	0.27	0	1		4916						

Source: SHP data, waves 2–12.

future experience the birth of a child of specified parity. The second group is the control group and it consists of people who could, but who did not experience a given transition.

Table 2: Number of respondents in the 'strong relationships' and 'weak relationships' groups, according to parental status

	Network size				Contact frequency[a]				Practical support[b]				Emotional support[b]			
	large		small		high		low		high		low		high		low	
	≥ 5.5		< 5.5		≥ 4		< 4		≥ 7		< 7		≥ 7.9		< 7.9	
Men:																
overall	2315	(39%)	3681	(61%)	2518	(42%)	3478	(58%)	2241	(37%)	3755	(63%)	1983	(33%)	4013	(67%)
childless	1204	(35%)	2229	(65%)	1411	(41%)	2022	(59%)	1354	(39%)	2079	(61%)	1204	(35%)	2229	(65%)
has a child aged 0	107	(52%)	99	(48%)	125	(61%)	81	(39%)	97	(47%)	109	(53%)	85	(41%)	121	(59%)
has a child aged 1–2	235	(51%)	224	(49%)	252	(55%)	207	(45%)	205	(45%)	254	(55%)	176	(38%)	283	(62%)
has a child aged 3–5	275	(46%)	319	(54%)	284	(48%)	310	(52%)	250	(42%)	344	(58%)	202	(34%)	392	(66%)
has a child aged 6–12	505	(44%)	636	(56%)	506	(44%)	635	(56%)	405	(35%)	736	(65%)	351	(31%)	790	(69%)
Women:																
overall	2208	(45%)	2708	(55%)	3059	(62%)	1857	(38%)	2692	(55%)	2224	(45%)	2478	(50%)	2438	(50%)
childless	882	(37%)	1533	(63%)	1379	(57%)	1036	(43%)	1331	(55%)	1084	(45%)	1216	(50%)	1199	(50%)
has a child aged 0	117	(55%)	96	(45%)	160	(75%)	53	(25%)	128	(60%)	85	(40%)	107	(50%)	106	(50%)
has a child aged 1–2	252	(54%)	219	(46%)	354	(75%)	117	(25%)	291	(62%)	180	(38%)	248	(53%)	223	(47%)
has a child aged 3–5	337	(55%)	278	(45%)	451	(73%)	164	(27%)	367	(60%)	248	(40%)	319	(52%)	296	(48%)
has a child aged 6–12	642	(53%)	569	(47%)	793	(65%)	418	(35%)	651	(54%)	560	(46%)	595	(49%)	616	(51%)

[a] times per month

[b] on a scale from 0 – *not at all* to 10 – *a great deal*

Source: SHP data, waves 2–12.

Note: Groups based on median values of network size, contact frequency, practical support, and emotional support.

In the case of estimates for a first child, the control group consists of childless people, i.e., those who did not have a child during the survey. In the analysis for a second child, the control group consists of childless people and those with only one child. In the analysis for a third child, the control group consists of the childless, those with one child, and those with two children. We also limit the sample to women aged 25–50 years and men aged 25–60 years to exclude respondents who are less likely to have children aged 12 or younger.

By restricting the sample to these two groups and by choosing the period of four or more years before a birth as the reference category, we assume that parents observed four years before a birth and people who will not experience a birth are sufficiently similar that we may treat them as a single group. Thus, for interpretation of results, both the control group and the period of four or more years before a birth serve as the reference category. Although the coefficients estimated in this way use only the within-person variation, they may be interpreted as a difference between the trajectories experienced by parents and by the respective control group. Note also that some of the respondents included in the analysis were not observed during the reference period of four or more years before a birth. This is not an obstacle for estimating the effects with such a reference category, because the unobserved change experienced by these people is captured by the fixed intercepts.

To control for the effect of historical time, the models also include dummies for waves (see the section on control variables). To avoid estimation problems resulting from collinearity of waves with parents' and children's age, we group together neighboring

survey waves during which the average life satisfaction was relatively stable (Brüderl and Ludwig 2014).

2.3.2 Dynamics of relationships with relatives

To estimate the effect of parenthood on relationships with relatives, we regress our dependent variables on a set of dichotomous variables marking stages of parenthood. Our analysis covers the period preceding a birth (four and more years before a birth; three years before; two years before; and one year before a birth), and we follow parents up to the moment when their child is 12 years old. This observation span slightly exceeds the length of the panel (12 years). Thus, even though our model rests solely on the within-person variation over time, it combines information from various people to estimate the trajectories of relationships with relatives.

Formally, our model for a first child is described by Equation 1.

$$\begin{aligned} \text{Support}_{it} = {} & \beta_{BB3} BB_{3it} + \beta_{BB2} BB_{2it} + \beta_{BB1} BB_{1it} + \\ & + \beta_{Age0} Age_{0it} + \beta_{Age1} Age_{1it} + \cdots + \beta_{Age12} Age_{12it} \\ & + \beta_{Birth2} Birth_{2it} + \beta_{Child2} Child_{2it} + \cdots + \\ & + \beta_{Birth5} Birth_{5it} + \beta_{Child5} Child_{5it} + \\ & + B_K X_{it} + (\alpha_i + u_{it}) \end{aligned} \tag{1}$$

In Equation 1, coefficients from β_{BB3} to β_{BB1} describe the dynamics of relationships with relatives in the period before a birth of a child (*'BB'* stands for *'before a birth'*). The coefficients from β_{Age0} to β_{Age12} describe how relationships change as the child gets older (from the age of zero to the age of twelve). The coefficients from β_{Birth2} to β_{Birth5} and from β_{Child2} to β_{Child5} control for a birth and presence of other children (in the case of a first child, other children include: a second, a third, a fourth, and a fifth child). X_{it} is a vector of control variables and B_K is a vector of respective β coefficients. Coefficient α_i refers to individual fixed effects (i.e the baseline level of relationships with the relatives of a specific person), and coefficient u_{it} is the error term.

2.3.3 Dynamics of life satisfaction of the 'strong relationships' and 'weak relationships' groups

To estimate the dynamics of life satisfaction of parents having strong and weak relationships with relatives, we used a fixed-effect model similar to the one presented in Equation 1 (see Equation 2).

$$
\begin{aligned}
\mathrm{LS}_{it} = {} & \beta_{BB3} BB_{3it} + \beta_{BB2} BB_{2it} + \beta_{BB1} BB_{1it} + \\
& + \beta_{BB3s} BB_{3it} Rel + \beta_{BB2s} BB_{2it} Rel + \beta_{BB1s} BB_{1it} Rel + \\
& + \beta_{Age0} Age_{0it} + \beta_{Age1} Age_{1it} + \cdots + \beta_{Age12} Age_{12it} \\
& + \beta_{Age0s} Age_{0it} Rel + \beta_{Age1s} Age_{1it} Rel + \cdots + \beta_{Age12s} Age_{12it} Rel \\
& + \beta_{Birth2} Birth_{2it} + \beta_{Child2} Child_{2it} + \cdots \\
& + \beta_{Birth5} Birth_{5it} + \beta_{Child5} Child_{5it} + \\
& + \beta_{Birth2s} Birth_{2it} Rel + \beta_{Child2s} Child_{2it} Rel + \cdots + \\
& + \cdots + \beta_{Birth5s} Birth_{5it} Rel + \beta_{Child5s} Child_{5it} Rel + \\
& + B_K X_{it} + (\alpha_i + u_{it})
\end{aligned}
\tag{2}
$$

Equation 2 includes interaction terms between the 'strong relationships' dummies and the variables marking the stages of parenthood ($BB_{3it}Rel \cdots BB_{1it}Rel$ and $Age_{0it}Rel \cdots Age_{12it}Rel$). These interaction terms test whether the dynamics of life satisfaction of parents who have strong relationships with relatives differ from those experienced by parents who have weak relationships with relatives.

We choose this strategy over the fixed effect model with time-varying interaction terms (i.e., a model including the interaction of changes in relationships with relatives and changes in stages of parenthood), because our research question refers to the moderating effect of *levels*, as opposed to *changes*, of relationships with relatives. In the fixed effect model with time-varying interaction terms, the effect of the levels of relationships would be captured by the individual fixed intercepts, and this would prevent us from estimating the effects of interest.

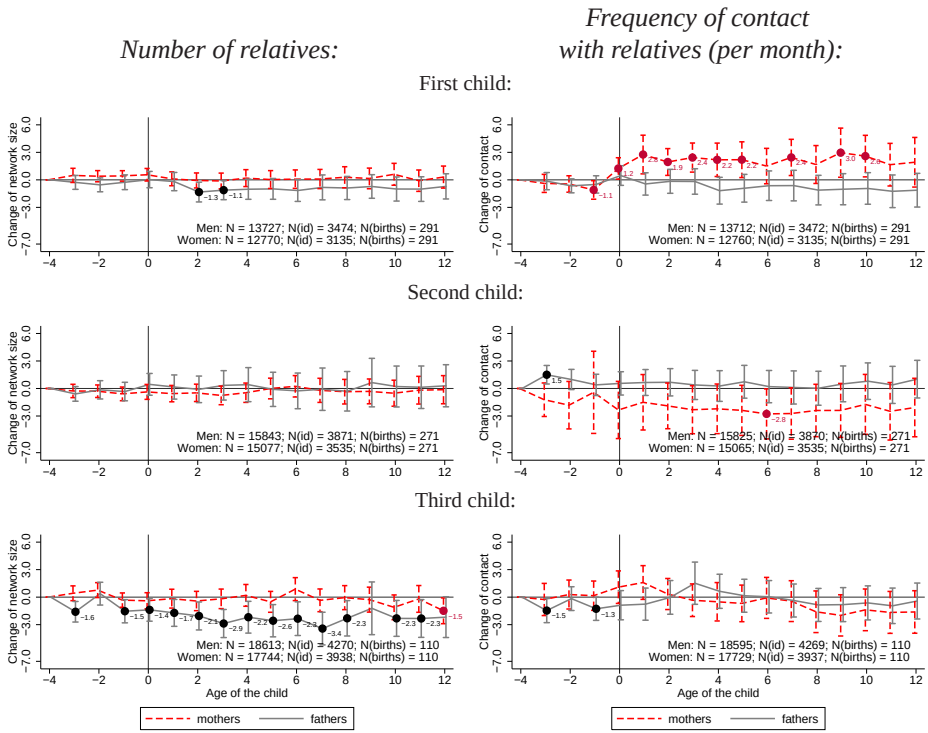
3. Results

3.1 Changes in relationships with relatives during parenthood

Table A–1 (Appendix) shows how relationships with relatives change for parents having their first child (as in Equation 1). Results for a second and third child are presented in Tables A–2 and A–3. For an easy overview, the coefficients for all models are presented in Figures 1 and 2.

The results for control variables are consistent with previous studies. The number of relatives in women's networks decreases with women's age. Never married and divorced people have smaller networks of relatives than married people. Availability of practical support increases with age. Divorce and separation increase the emotional support available to women but not to men. Furthermore, people who are more satisfied with their health declare higher availability of practical and emotional support from their relatives than people who are less satisfied with their health.

Figure 1: **Changes in the number of non-residing relatives with whom parents or prospective parents are on good terms (left column) and the frequency of contact with non-residing relatives (right column). Separately for first, second, and third child**



Source: SHP data, waves 2–12.
Note: Estimates as in Equation 1; separately for men and women and for a first, a second, and a third child. The reference category is the period of four or more years before a birth. The graphs show the predicted change (β coefficients) with the confidence intervals (90%). Predictions statistically significantly different from zero are marked with dots. The labels show the exact value of the prediction.

3.1.1 Network size

The left panel of Figure 1 shows the changes in the number of relatives with whom respondents are on good terms. The size of network does not change systematically with the birth and aging of a first and second child, but it decreases systematically among men

having their third child. The effect is significant one year before a birth of a third child and reaches strongest (most negative) values when a third child is 7 years old: 3.4 persons less than among otherwise similar men having maximum two children.

3.1.2 Contact frequency

The right panel of Figure 1 shows the results for the frequency of contact. Among women, birth of a first child is associated with a statistically significant increase in frequency of contact with non-residing relatives. In the first year after a childbirth mothers meet their relatives on average 1.2 times per month more than in the period before a birth. Later on, mothers meet their relatives about two to three times per month more than they did four or more years before a birth (e.g., 1.9 times more when a child is 2 years old; 3 times more when a child is 9 years old). Such an increase is consistent with the literature and is likely related to sharing with relatives the news on the development of a child, or to relatives providing childcare. This result also suggests that our frequency variable reflects, at least in part, the contacts triggered by parenthood and possibly related to parental need for support.

Having a second child decreases women's frequency of contact with non-residing relatives; this effect is statistically significant only when a second child is six years old.

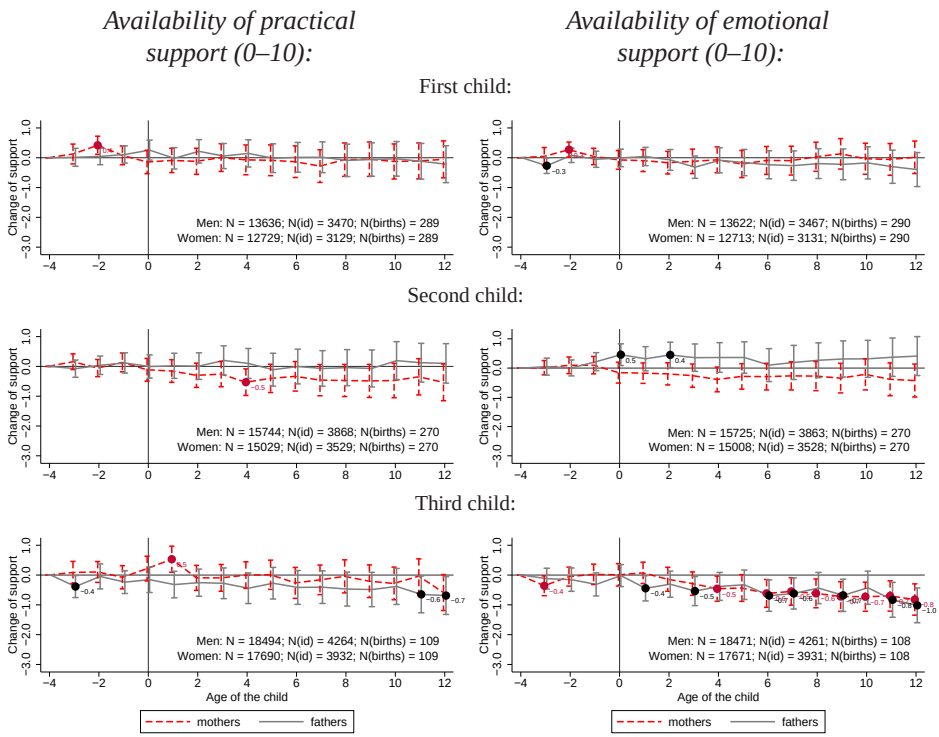
3.1.3 Availability of practical support

Practical support (left panel of Figure 2) does not systematically change with parenthood. Some coefficients are statistically significant, but they do not form a consistent pattern.

3.1.4 Availability of emotional support

Emotional support (right column of Figure 2) also changes little, with the exception of mothers and fathers having their third child, for whom the perceived availability of emotional support from relatives systematically decreases. When a third child is about 12 years old, parents report that the emotional support available to them is between 0.8 points (mothers) and 1 point (fathers) lower (on a scale from 0 to 10) than it was before the birth of a third child.

Figure 2: **Changes in the availability of practical support (left column) and emotional support (right column) from non-residing relatives with whom parents or prospective parents are on good terms**



Source: SHP data, waves 2–12.
Note: Estimates as in Equation 1; separate for men and women and for a first, a second, and a third child. Reference category is the period of four or more years before a birth. The graphs show the predicted change (β coefficients) with the confidence intervals (90%). Predictions significantly statistically different from zero are marked with dots. The labels show the exact value of the prediction.

3.1.5 Summary

The only aspect of relationships for which we observed an increase is the frequency of mothers' contact with their relatives. We found no evidence of increase in the size of a network, nor of increased availability of practical or emotional support. We also found no confirmation of Hypotheses 1A and 1B: the increase in contact with relatives upon a first

birth is persistent over time (i.e., it is not limited to the care-intense period); moreover, we do not observe a similar increase at subsequent births. Furthermore, in contrast to our hypotheses, we found that parents with three children experience a decline, rather than an increase, of availability of emotional support from their relatives, and fathers with three children declare themselves to have a smaller network of relatives. This result has not been reported by the literature before.

3.2 Buffering effect of family support

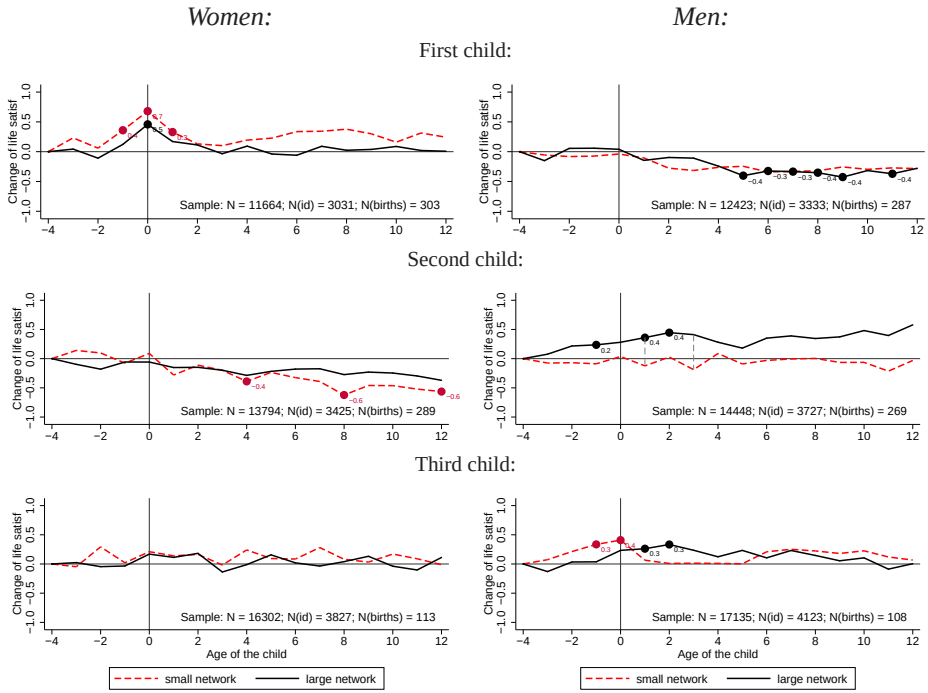
We now turn to the second part of the analysis, i.e, we investigate how the trajectories of life satisfaction differ between parents who belong to the 'strong relationships' rather than to the 'weak relationships' group. The results are presented in Figures 3–6; the full results are reported in Tables A–4 through A–6.

The effects of control variables are consistent with the literature. Life satisfaction correlated negatively with being single or experiencing a divorce (among men), widowhood (among women), and unemployment (among men). Positive correlates of life satisfaction included household income and satisfaction with one's own health. Support received from social networks correlated with life satisfaction positively, but the pattern was different for men and women. Men benefited only from the support provided by their partner. Among women, sources of support positively correlated with well-being were also friends, and – only in the analysis for a second child – neighbors.

3.2.1 Network size

The buffering effect of size of network of relatives is statistically significant for fathers having their second child (Figure 3, see the vertical lines). Consistent with the buffering mechanism, the life satisfaction of fathers having a larger network of relatives increases more than life satisfaction of fathers having smaller network of relatives. The difference is significant when a child is 1 and 3 years old.

Figure 3: Changes in life satisfaction of parents or prospective parents having large or small network of non-residing relatives. Shown separately for first, second, and third child



Source: SHP data, waves 2–12.
Note: Estimation as in Equation 2. Reference category is the period of four or more years before a birth. Network size is calculated for each individual as an average over the observation period. 'Large network' refers to median or larger network (≥ 5.5); 'small network' refers to network size below median (< 5.5). The vertical lines connecting the two trajectories of life satisfaction indicate the periods when the difference between the 'strong relationships' and the 'weak relationships' group is statistically significant. Predictions different from zero that are statistically significant are marked with dots. The labels show the exact value of the predictions.

3.2.2 Contact frequency

The results (Figure 4) are unexpected and statistically significant for mothers having their first child: mothers staying in less frequent contact with their relatives experience a stronger increase in life satisfaction during parenthood than mothers staying in more

frequent contact with relatives. The difference is statistically significant when a child is 1, 2, and 4 years old (see the vertical lines in Figure 4). A similar effect occurs for men having their second child: the life satisfaction of men who have rare contact with their relatives increases more than life satisfaction of men who have more frequent contact with relatives. The difference is statistically significant when a first child is nine year old.

Predominantly insignificant effects in the opposite direction, i.e., in line with buffering mechanism, occur for mothers and fathers having their third child.

3.2.3 Availability of practical support

After their first childbirth, women with low availability of practical support from relatives experience a stronger increase in life satisfaction than women with higher availability of practical support (Figure 5). The difference is statistically significant when a first child is 2 years old or older (see the vertical lines in Figure 5). The size of the difference between low and high support groups takes the values between 0.5 and 0.8 point (on a scale from 0 to 10).

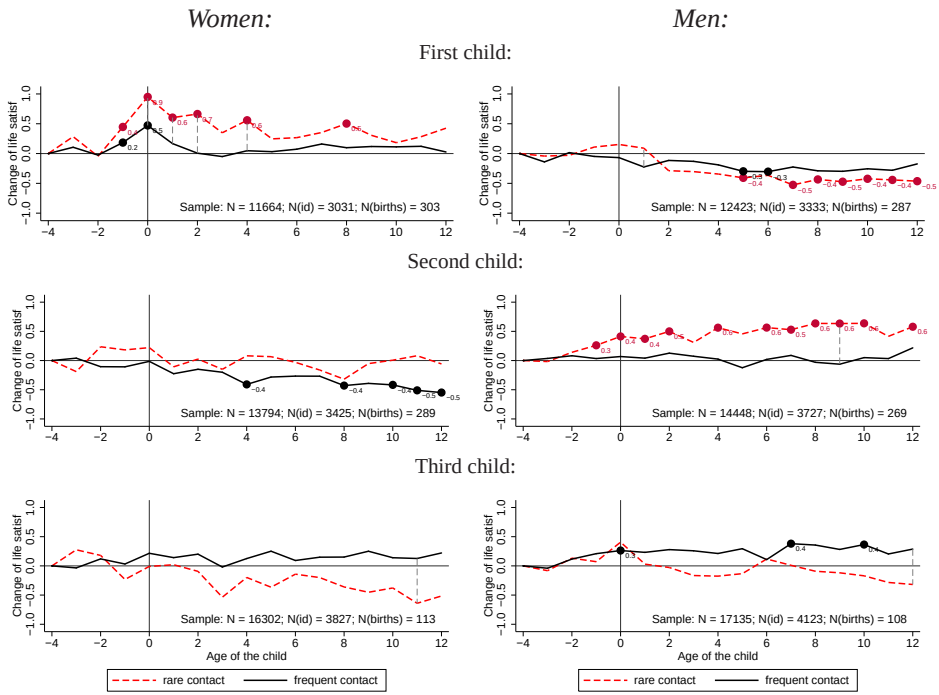
A different pattern occurs for women having their second child and men having their third child. In these cases the trajectory of life satisfaction is more positive or less negative among parents having access to higher levels of practical support from relatives (statistically significant for women when a second child is 1 and 7, and for men when a third child is 8 years old).

3.2.4 Availability of emotional support

Again, after their first birth, women having access to lower levels of emotional support from relatives experience a more positive trajectory of life satisfaction than women having access to higher levels of emotional support (vertical lines in Figure 6). The difference between the two groups remains constant over time, at a level of about 0.4–0.6 point.

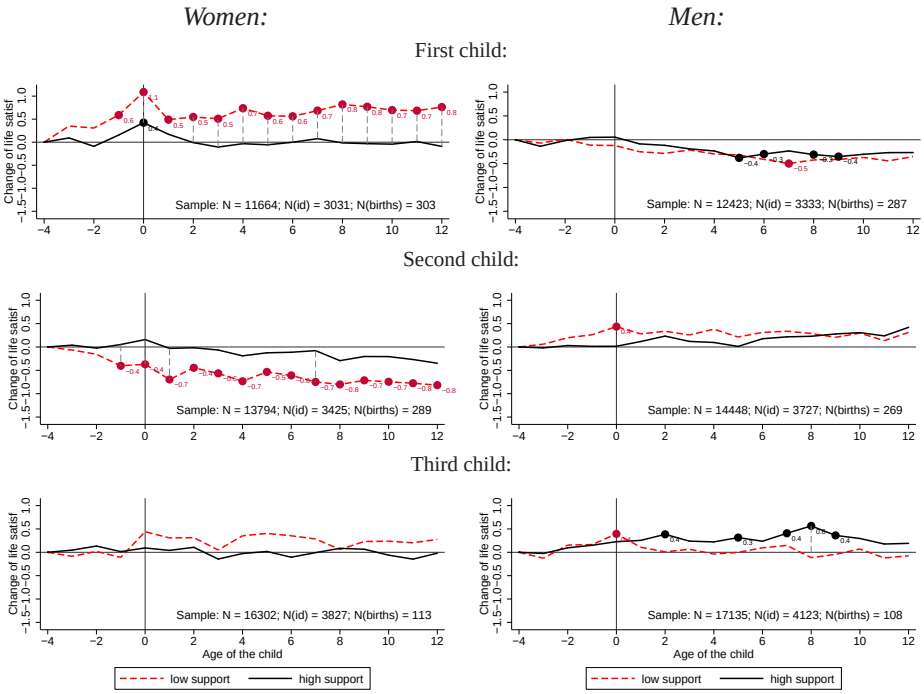
Differences also occur for men having their third child, but they are in accordance with the buffering hypothesis. The trajectories of life satisfaction are more positive among fathers having access to more emotional support from relatives. The difference is statistically significant before the third birth, and later when a third child is 4 and 7 years old or older.

Figure 4: **Changes in life satisfaction of parents or prospective parents having frequent or rare contact with non-residing relatives. Shown separately for first, second, and third child. Values refer to number of contacts per month**



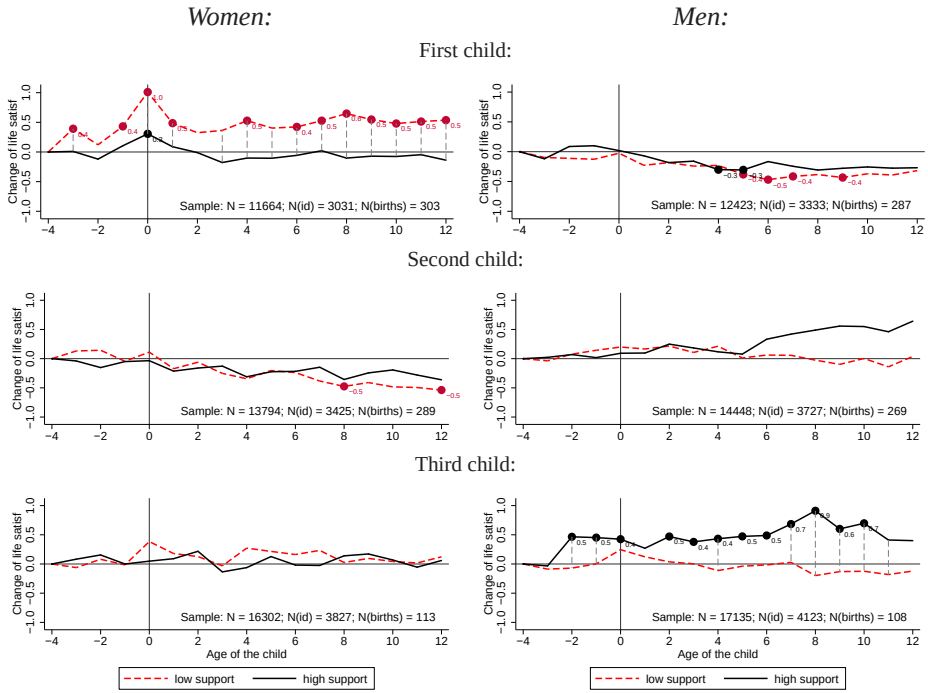
Source: SHP data, waves 2–12.
Note: Estimation as in Equation 2. Reference category is the period of four or more years before a birth. Contact frequency is calculated for each individual as an average over the observation period. 'High contact frequency' refers to median or higher frequency of contact (≥ 4 times per month); 'low contact frequency' refers to frequency of contact below median (< 4 times per month). The vertical lines connecting the two trajectories of life satisfaction indicate the periods when the difference between the 'strong relationships' and the 'weak relationships' group is statistically significant. Predictions different from zero that are statistically significant are marked with dots. The labels show the exact value of the predictions.

Figure 5: Change of life satisfaction of parents or prospective parents receiving high and low practical support from relatives. Shown separately for first, second, and third child



Source: SHP data, waves 2–12.
Note: Estimation as in Equation 2. Our reference category is the period of four or more years before a birth. Support is calculated for each individual as an average over the observation period. 'High support' refers to median or higher support (≥ 7); 'low support' refers to support below the median (< 7). The vertical lines connecting the two trajectories of life satisfaction indicate the periods when the difference between the 'strong relationships' and the 'weak relationships' group is statistically significant. Predictions different from zero that are statistically significant are marked with dots. The labels show the exact value of the predictions.

Figure 6: **Predicted life satisfaction of parents or prospective parents receiving high and low emotional support from relatives. Shown separately for first, second, and third child**



Source: SHP data, waves 2–12.
Note: Estimation as in Equation 2. Our reference category is the period of four or more years before a birth. Support is calculated for each individual as an average over the observation period. 'High support' refers to median or higher support (≥ 7.9); 'low support' refers to support below the median (< 7.9). The vertical lines connecting the two trajectories of life satisfaction indicate the periods when the difference between the 'strong relationships' and the 'weak relationships' group is statistically significant. Predictions different from zero that are statistically significant are marked with dots. The labels show the exact value of the predictions.

3.2.5 Summary

Some of our results supported the buffering hypothesis, while others did not (see Table 3). The results for a second and a third birth for availability of practical and emotional support were partly consistent with the buffering mechanism (Hypothesis 2), in particular among mothers having a second child, for availability of practical support, and among

men having a third child, for availability of emotional support. In these cases, life satisfaction trajectories tended to be more positive among parents having better access to relatives' support than among parents having less access to relatives' support. However, our results do not support Hypotheses 2A and 2B. We expected that the moderating effect was stronger right after a birth and decreased as a child got older, but instead we observed that the moderating effect increased over time. We also expected that the moderating effect occurred after each birth, and it was stronger for a first child and weaker for subsequent children; instead we observe some buffering effect only at higher parities.

Table 3: Synthesis of findings on the buffering effect of family support during parenthood

	Women			Men		
Change in life satisfaction according to...	1^{st} child	2^{nd} child	3^{rd} child	1^{st} child	2^{nd} child	3^{rd} child
network size	–	–	–	–	some buffering effect	–
frequency of contact	unexpected effect	–	some buffering effect	–	unexpected effect	some buffering effect
availability of practical support	unexpected effect	**consistent buffering effect**	–	–	–	some buffering effect
availability of emotional support	unexpected effect	–	–	–	–	**consistent buffering effect**

Results for contact frequency tended to be the opposite of predictions for the buffering effect: mothers having a first child and fathers having a second child experienced more positive changes in life satisfaction if they had less frequent contact with their relatives. This is consistent with the work by Bost et al. (2002) and suggests that frequent contact with relatives may signify parental uncertainty or problems with childbearing. In principle, the frequent contact might also show that parents provide support to their relatives rather than receive support. Thus, the less positive trajectory of life satisfaction among parents staying in more frequent contact with relatives might indicate a double burden experienced by such parents. Note however, that we do not observe this effect at higher parities, where such a "double burden" should be stronger.

The results on availability of practical and emotional support among women having their first child also contradicted Hypothesis 2. Mothers who had better access to relatives' support experienced a smaller increase in life satisfaction after the birth of their first child

than mothers having less access to relatives' support. The difference between the two groups of mothers did not decrease as children became older. The subsequent section further analyses these results.

3.3 Additional analyses for first-time mothers

The results for first-time mothers has not been reported by previous studies and the literature provides few clues about the possible explanations. In the following section we formulate and test four such explanations.

3.3.1 Endogeneity of relationships with relatives

Relationships with relatives may intensify in response to difficulties or problems experienced by the parents (as suggested by Bost et al. 2002). The literature showed that family help is provided in response to a crisis (Eggebeen and Davey 1998; Silverstein, Gans, and Yang 2006). Such difficulties and problems experienced by parents may lower parental life satisfaction. Thus, it is possible that the higher life satisfaction of mothers with weaker relationships with relatives reflect the fact that they have experienced fewer problems. To account for this possibility, we investigated the determinants of belonging to the 'strong relationships' group among women. 'Strong relationships' referred to the above median size of a network of relatives, contact frequency, availability of practical support, or availability of emotional support from non-resident relatives. We defined the 'strong relationships' as a time invariant variable and regressed it on individual predictors using cross-sectional logistic models (see Table A–7).

Our results showed that the odds of belonging to the 'strong relationships' group are higher among women who are privileged in terms of education and income, mothers and prospective mothers, as well as women born in more recent cohorts. These results are not affected by including the migratory status in the model. This suggests that relationships with relatives should not be considered to be coping strategies of disadvantaged women, but rather additional dimensions of social privilege.

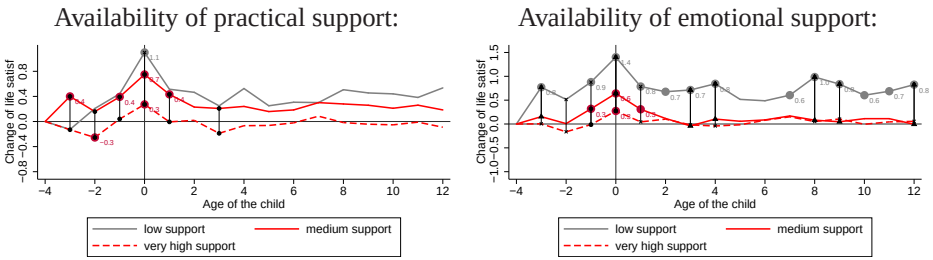
3.3.2 Do strong relationships with relatives "suffocate" young mothers?

Second, it is possible that strong relationships with relatives are detrimental for the life satisfaction of mothers, because they interfere in the life of young mothers too strongly. Moreover, the one-sided dependence on one's relatives may be detrimental for young mothers' self esteem. Thus, such relationship may be "suffocating" and may decrease the life satisfaction of young mothers. To inspect this hypothesis, we conducted an additional analysis of Hypothesis 2, in which we divided first-time mothers into three rather than two groups: 'weak relationships', 'moderate relationships', and 'very strong relationships'

with relatives.[3] We tested whether the moderate relationships are more conductive to parental life satisfaction than weak or very strong relationships.

The results are presented in Figure 7. We did not observe the hypothesized situation. For both practical and emotional support, changes in life satisfaction were consistently most positive among women with lowest availability of support and intermediate among women with moderate availability of support.

Figure 7: Changes in life satisfaction of prospective and first-time mothers having low, moderate, and very high availability of support from relatives



Source: SHP data, waves 2–12.
Note: Estimates as in Equation 2 with three levels of support. The reference category is the period of four or more years before a birth. The graphs show the predicted change (β coefficients); the predictions significantly statistically different from zero are marked with dots. The labels show the exact value of the prediction.

3.3.3 Different motivation for parenthood

It is possible that women with weaker relationships with relatives forecast that they will not be able to count on relatives' support and, therefore, they decide to have a child only if they are very strongly motivated. In other words, a consequence of weak relationships with relatives may be a stronger selection to parenthood on preferences. Thus, the life satisfaction trajectories of women with stronger relationships may be less positive because of their lower, on average, desire to become mothers.

This hypothesis did not find support in the data. Among women with high availability of practical support from relatives and who eventually had their first child during

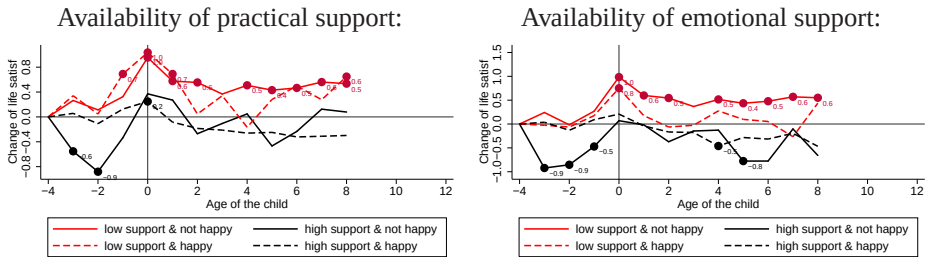
[3] As previously, the groups are defined as time-invariant. Low intensity of relationships is defined as under the 25^{th} percentile, the moderate intensity of relationships is defined as values between 25^{th} and 75^{th} percentile, and the very intense relationships with relatives are defined as the one above the 75^{th} percentile. The 25^{th} percentile takes the value of 5.5 for practical support, and 6.67 for emotional support. The 75^{th} percentile takes the value of 8.56 for practical support, and 9 for emotional support.

the panel, 70% declared that they were planning to have a child two to four years before a first birth, whereas among women with low availability of practical support only 43% planned to have a child. The respective percentages for emotional support were 70% and 54%. Thus, we found no evidence that mothers with less access to support from relatives are more determined to have a child.

3.3.4 Initial life satisfaction

Finally, it is possible that the life satisfaction is high for women who have better access to relatives' support, independent of parenthood. Thus, after a birth their life satisfaction cannot increase as much as the life satisfaction of women who have less access to relatives' support and thus they experience a less positive change ('ceiling effect'). To investigate this hypothesis, we re-estimated the models of the buffering effect by distinguishing women whose life satisfaction was under the median value before the birth of a child vs. those whose life satisfaction was above the median (see Figure 8). Data confirmed that women with better access to support from relatives were more satisfied with their lives before a childbirth (for practical support: $\mu_0 = 8.1$, $\mu_1 = 8.4$, $P(\mu_0 < \mu_1) = 0.007$; for emotional support: $\mu_0 = 8.1$, $\mu_1 = 8.5$, $P(\mu_0 < \mu_1) = 0.000$).

Figure 8: Changes in life satisfaction of prospective and first-time mothers belonging to the groups defined by pre-birth level of happiness and availability of relatives' support



Source: SHP data, waves 2–12.
Note: Reference category is the period of four or more years before a birth. The graphs show the predicted change (β coefficients); the predictions statistically significantly different from zero are marked with dots. The labels show the exact value of the prediction.

The results are shown in Figure 8. Two observations stand out. First, initially less happy mothers having little access to relatives' support (low support and not happy) experienced most sustained, long-term increase in life satisfaction after a first birth. Second, women whose pre-birth life satisfaction was high and who had good access to relatives'

support (high support and happy) experienced relatively small changes in life satisfaction after a birth. These results suggest that differences in the initial level of life satisfaction partly explain the unexpected results obtained for first-time mothers. Women who have overall good access to relatives' support are on average more happy before a birth and they experience a smaller increase in life satisfaction following a birth.

4. Discussion

The goal of this analysis was to investigate the buffering effect of relationships with relatives on parental life satisfaction in Switzerland. We expected to observe two elements of buffering effect. First, we forecast that strength of relationships with relatives increased in response to parenthood (Hypothesis 1). Second, we expected that stronger relationships with relatives would correlate with more positive trajectories of parental life satisfaction (Hypothesis 2). In other words, we hypothesized that strong relationships with relatives would make parenthood easier and thus more satisfactory, especially in the Swiss context of low public support for parenthood.

Our results showed that the birth of a first child positively correlated with frequency of contacts with non-resident relatives. The change was substantial (2–3 contacts per month more) and long-term. However, contrary to Hypotheses 1A and 1B, the increased frequency of contact with relatives was not specific for the care-intense stages of parenthood. Moreover, an increase occurred only after a first birth and not after subsequent births. This suggests that the increase in contact is triggered by parenthood, but it is not a direct response to parental need for help.

Other measures of relationships with relatives (i.e., number of relatives with whom one is on good terms, and availability of practical and emotional support) increased neither in response to births, nor in later stages of parenthood. The "no change" result for network size and availability of support is consistent with previous studies showing that family networks are stable during parenthood (Kalmijn 2012; Bost et al. 2002). However, as stated above, and contrary to Kalmijn (2012) for the same data, we observed a long-term increase in the frequency of contact with relatives upon entering parenthood by women, which is consistent with the work by Munch, McPherson, and Smith-Lovin (1997).

Furthermore, contrary to our expectations, relationships with relatives eroded more among parents having three children than among persons having two children or less. Specifically, fathers having a third child experienced consistently stronger erosion of network size and availability of emotional support than men having two children or less. A similar decline among mothers occurred for emotional support. This pattern may be explained by the lack of time of parents in larger families. Career investments may limit fathers' capability to devote time to relationships with relatives. It is also possible that

the perceived decline of support availability may partly reflect higher needs for support of such parents rather than the declining availability of relatives to provide support. These results have not been reported in the literature before, and they seem an interesting field for further investigations.

The second aspect of the buffering effect investigated by this paper was the life satisfaction advantage of parents having stronger relationships with their relatives over parents whose relationships with relatives were weaker (Hypothesis 2). We found some evidence of such a buffering effect among parents having their second and third child. However, we observed no life satisfaction advantage of strong relationships with relatives among parents having their first child. This is not consistent with Hypothesis 2B, which postulated that such an effect should be strongest upon a birth of a first child. This suggests that relationships with relatives are more important in families having two or more children than in families with only one child. It also suggests that a qualitative change occurs in the needs of families when they have a second child. This is consistent with the idea that the demands of parenthood are likely higher at higher parity levels, when the financial costs and the constraints on parental time are greater. Additionally, we found no support for the Hypothesis 2A, which postulated that the buffering effect of relationships with relatives is stronger in the early, care-intense stages of parenthood. Contrary to our expectation, if a buffering effect occurs, it tends to be long-term rather than temporary.

Unexpectedly, our results have shown that first-time mothers having less access to practical and emotional support from relatives experienced a stronger increase in life satisfaction during parenthood than mothers with better access to relatives' support. Our additional tests demonstrated that this result is partly driven by the fact that mothers with better access to relatives' support are already more satisfied with their lives before a first birth, thus their life satisfaction cannot increase much in response to a birth. However, the long-term character of this effect suggests that women who have little emotional and practical support from their relatives may derive more life satisfaction from having their first child than women with stronger support from relatives. Having a first child may signify for such women that they are forming a family of their own, thus meeting their needs for love and belonging.

This research has limitations. First, the variables do not allow us to understand who the non-resident relatives are. In other words, we do not know if respondents refer to their relationship with their own parents, parents-in-law, sibling, or other relatives. We have no access to information about whether parents of respondents are alive, and how closely they reside. Such information has been included in the 2013 wave; however, as a considerable portion of respondents in our sample did not participate in this wave, we do not use the information in the present analysis. This is a shortcoming, because grandparents may provide more support during parenthood than other relatives. Second, we have no access to various types of information relevant to parental well-being, such as, for example, health of the child. Third, even though we use several measures of

relationships with relatives, we are constrained to measures available in the data and we cannot account for potentially important aspects of relationships, such as emotional closeness, conflict, or distance of residence. Moreover, the measures which are available in the data have limitations. The availability of practical support is likely to capture the temporary availability of help in emergency cases rather than a commitment to regular help, even though the latter may be of greater importance for parental life satisfaction than the former. Finally, our results suggest some causal relationships but do not provide evidence of such relationships. Our results are open to various interpretations, as it is not clear whether and to what extent strong relationships with relatives facilitate parenting, and to what extent they are a response to the needs of parents.

The message of our study is that becoming a parent does not automatically strengthen the relationships with non-resident relatives. However, we found evidence that support from relatives is a resource for parents, especially those with two or more children. Life satisfaction of parents of two or three children increases more in response to parenthood if the parents have better access to the support of their relatives. The importance of relatives for families with two children or more may be a signal of their frailty and point to the role of family policies.

These results pertain to an affluent society, where a majority of parents are relatively old, have a stable economic situation, and are married. Even in such secure social conditions, where parents seem economically prepared for challenges of parenthood, relationships with relatives seem to protect life satisfaction of parents. This may be related to the limited support for parenthood offered by the state in Switzerland; thus, generality of this conclusion should be verified by future research.

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Appendix

Predictors of dynamics of relationships with relatives during parenthood

Table A–1: Predictors of dynamics of relationships with relatives, first child

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a first child:								
3 years before birth (ref: 4y before)	0.49	-0.38	0.13	0.05	-0.28	-0.14	0.01	-0.27
	(0.301)	(0.521)	(0.532)	(0.790)	(0.548)	(0.805)	(0.936)	(0.091)+
2 years before birth (ref: 4y before)	0.40	-0.45	0.42	0.27	-0.54	-0.65	0.04	0.08
	(0.282)	(0.409)	(0.024)*	(0.079)+	(0.238)	(0.157)	(0.793)	(0.584)
1 year before birth (ref: 4y before)	0.43	-1.10	0.08	0.04	-0.26	-0.50	0.11	-0.05
	(0.214)	(0.073)+	(0.675)	(0.798)	(0.593)	(0.385)	(0.532)	(0.758)
birth (ref: 4y before)	0.56	1.24	-0.14	-0.07	0.03	0.47	0.26	-0.01
	(0.180)	(0.081)+	(0.551)	(0.709)	(0.956)	(0.470)	(0.209)	(0.972)
1 years old (ref: 4y before)	0.11	2.76	-0.09	-0.10	-0.19	-0.45	-0.02	0.04
	(0.803)	(0.031)*	(0.718)	(0.667)	(0.756)	(0.547)	(0.931)	(0.823)
2 years old (ref: 4y before)	-0.06	1.95	-0.12	-0.17	-1.33	-0.16	0.21	-0.07
	(0.897)	(0.028)*	(0.652)	(0.473)	(0.042)*	(0.842)	(0.368)	(0.733)
3 years old (ref: 4y before)	-0.12	2.43	0.01	-0.12	-1.12	-0.18	0.06	-0.32
	(0.816)	(0.012)*	(0.981)	(0.628)	(0.076)+	(0.835)	(0.822)	(0.161)
4 years old (ref: 4y before)	0.19	2.19	-0.07	-0.07	-1.02	-1.18	0.15	-0.09
	(0.734)	(0.048)*	(0.817)	(0.791)	(0.127)	(0.183)	(0.600)	(0.737)
5 years old (ref: 4y before)	0.03	2.20	-0.08	-0.21	-0.99	-0.91	-0.01	-0.16
	(0.954)	(0.064)+	(0.787)	(0.447)	(0.153)	(0.320)	(0.961)	(0.547)
6 years old (ref: 4y before)	0.08	1.50	-0.13	-0.09	-1.16	-0.64	0.01	-0.23
	(0.897)	(0.200)	(0.680)	(0.749)	(0.109)	(0.515)	(0.964)	(0.411)
7 years old (ref: 4y before)	0.09	2.45	-0.28	-0.10	-0.82	-0.62	0.02	-0.26
	(0.886)	(0.042)*	(0.399)	(0.744)	(0.320)	(0.538)	(0.959)	(0.378)
8 years old (ref: 4y before)	0.28	1.67	-0.06	0.03	-0.89	-1.12	-0.09	-0.20
	(0.683)	(0.183)	(0.851)	(0.913)	(0.247)	(0.254)	(0.791)	(0.519)
9 years old (ref: 4y before)	0.16	2.96	-0.05	0.13	-0.72	-1.02	-0.06	-0.22
	(0.819)	(0.069)+	(0.892)	(0.672)	(0.355)	(0.322)	(0.864)	(0.481)
10 years old (ref: 4y before)	0.61	2.59	-0.12	-0.03	-1.00	-0.94	-0.04	-0.17
	(0.402)	(0.060)+	(0.727)	(0.916)	(0.211)	(0.370)	(0.916)	(0.598)
11 years old (ref: 4y before)	-0.09	1.66	-0.11	-0.06	-1.01	-1.25	-0.12	-0.30
	(0.899)	(0.241)	(0.771)	(0.861)	(0.218)	(0.249)	(0.745)	(0.375)
12 years old (ref: 4y before)	0.30	1.92	-0.05	0.02	-0.71	-1.13	-0.22	-0.40
	(0.677)	(0.243)	(0.885)	(0.964)	(0.395)	(0.313)	(0.566)	(0.253)
birth of the 2nd child	-0.07	-0.78	-0.02	-0.14	0.49	-0.02	-0.07	0.24
	(0.848)	(0.227)	(0.893)	(0.379)	(0.331)	(0.973)	(0.675)	(0.123)
2nd child present	-0.13	0.43	-0.15	-0.01	-0.52	-0.19	0.12	-0.05
	(0.720)	(0.547)	(0.345)	(0.923)	(0.271)	(0.710)	(0.531)	(0.768)
birth of the 3rd child	-0.67	0.97	0.07	0.02	-0.95	-0.82	-0.04	0.21
	(0.141)	(0.318)	(0.760)	(0.932)	(0.141)	(0.275)	(0.883)	(0.380)
3rd child present	0.42	-0.72	-0.22	-0.22	-0.01	1.13	-0.05	-0.37
	(0.348)	(0.448)	(0.312)	(0.222)	(0.985)	(0.198)	(0.856)	(0.092)+
birth of the 4th child	0.25	1.90	0.26	0.43	0.02	-1.15	-0.74	-0.69
	(0.877)	(0.233)	(0.561)	(0.284)	(0.985)	(0.605)	(0.037)*	(0.028)*
4th child present	-0.02	0.04	-0.60	-0.35	-0.51	-1.87	0.65	0.51
	(0.990)	(0.979)	(0.118)	(0.305)	(0.522)	(0.204)	(0.110)	(0.047)*
age	-0.12	-0.07	0.05	0.02	-0.03	-0.07	0.05	0.03
	(0.040)*	(0.553)	(0.042)*	(0.445)	(0.615)	(0.348)	(0.059)+	(0.159)
age^2	0.00	0.01	0.00	-0.00	-0.00	-0.00	0.00	-0.00
	(0.095)+	(0.015)*	(0.686)	(0.908)	(0.423)	(0.200)	(0.143)	(0.957)
never married (ref: married)	-1.33	-0.04	-0.10	-0.02	-0.88	0.07	-0.18	0.03
	(0.000)***	(0.938)	(0.503)	(0.862)	(0.061)+	(0.888)	(0.279)	(0.819)
divorced or separated (ref: married)	-0.93	-1.22	0.30	0.43	-1.11	-0.36	-0.06	-0.26
	(0.030)*	(0.198)	(0.149)	(0.032)*	(0.004)*	(0.637)	(0.830)	(0.264)
widowed (ref: married)	-2.64	2.68	0.46	-0.23	6.78	-0.41	0.63	0.49
	(0.269)	(0.518)	(0.273)	(0.718)	(0.091)+	(0.840)	(0.176)	(0.125)

Table A–1: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a first child:								
year of divorce	-1.33	-1.10	0.10	0.54	-1.33	-1.05	-0.44	0.03
	(0.003)*	(0.207)	(0.675)	(0.014)*	(0.003)*	(0.193)	(0.203)	(0.922)
year of marriage	-0.41	-0.37	-0.19	-0.23	-0.14	0.27	-0.06	-0.04
	(0.215)	(0.535)	(0.145)	(0.080)+	(0.672)	(0.544)	(0.716)	(0.784)
co-resides with grandparents	-0.14	-1.42	-0.78	0.22	-2.43	-1.82	0.29	-0.24
	(0.830)	(0.308)	(0.199)	(0.606)	(0.058)+	(0.231)	(0.546)	(0.639)
health satisfaction	0.07	0.19	0.03	0.06	0.00	-0.08	0.05	0.05
	(0.185)	(0.004)*	(0.058)+	(0.000)***	(0.931)	(0.133)	(0.012)*	(0.025)*
household income	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	0.00	-0.00
	(0.285)	(0.667)	(0.077)+	(0.213)	(0.528)	(0.204)	(0.957)	(0.522)
unemployed (ref: employed or inactive)	0.03	-0.94	-0.03	0.05	0.33	0.88	0.03	0.16
	(0.954)	(0.232)	(0.902)	(0.813)	(0.489)	(0.063)+	(0.901)	(0.443)
waves 2–3 (ref: waves 7–9)	-0.38	-0.11	0.07	0.10	0.12	-0.15	0.05	0.13
	(0.195)	(0.855)	(0.562)	(0.401)	(0.727)	(0.693)	(0.699)	(0.324)
waves 4–6 (ref: waves 7–9)	-0.27	0.05	0.06	0.03	0.17	0.24	0.06	0.03
	(0.131)	(0.877)	(0.397)	(0.700)	(0.393)	(0.287)	(0.485)	(0.741)
waves 10–12 (ref: waves 7–9)	-0.28	0.14	-0.09	-0.06	-0.29	0.25	-0.16	-0.14
	(0.193)	(0.724)	(0.238)	(0.386)	(0.159)	(0.299)	(0.051)+	(0.088)+
Adjusted R^2	0.008	0.005	0.002	0.003	0.006	0.004	0.002	0.001
N(id)	3135	3135	3129	3131	3474	3472	3470	3467
Observations	12770	12760	12729	12713	13727	13712	13636	13622

[a] times per month
[b] on a scale from 0 – *not at all* to 10 – *a great deal*
$+p < 0.1;\ *p < 0.05;\ ***p < 0.000$; p-values in parentheses;

Source: SHP data, waves 2–12.
Note: Fixed-effect estimates with clustered standard errors. Sample consists of women aged 25–50 years and men aged 25–60 years, including parents with a first child under the age of 13 and a reference group (childless people).

Table A–2: Predictors of dynamics of relationships with relatives, second child

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a second child:								
3 years before birth (ref: 4y before)	-0.27	-1.22	0.16	0.01	-0.59	1.50	-0.08	0.05
	(0.542)	(0.270)	(0.327)	(0.929)	(0.225)	(0.015)*	(0.666)	(0.776)
2 years before birth (ref: 4y before)	-0.30	-1.82	-0.06	0.09	-0.15	0.98	0.04	0.01
	(0.474)	(0.247)	(0.752)	(0.589)	(0.811)	(0.142)	(0.842)	(0.975)
1 year before birth (ref: 4y before)	-0.59	-0.42	0.14	0.10	-0.33	0.40	0.12	0.22
	(0.195)	(0.878)	(0.479)	(0.579)	(0.587)	(0.574)	(0.574)	(0.241)
birth (ref: 4y before)	-0.37	-2.34	-0.11	-0.16	0.45	0.56	-0.00	0.46
	(0.452)	(0.216)	(0.629)	(0.471)	(0.532)	(0.470)	(0.986)	(0.042)*
1 years old (ref: 4y before)	-0.56	-1.50	-0.15	-0.17	0.16	0.65	0.02	0.32
	(0.304)	(0.413)	(0.503)	(0.415)	(0.842)	(0.446)	(0.939)	(0.206)
2 years old (ref: 4y before)	-0.48	-1.90	-0.30	-0.20	-0.09	0.68	0.01	0.45
	(0.409)	(0.211)	(0.228)	(0.391)	(0.916)	(0.453)	(0.973)	(0.089)+
3 years old (ref: 4y before)	-0.76	-2.31	-0.26	-0.26	0.34	0.39	0.20	0.36
	(0.220)	(0.146)	(0.313)	(0.284)	(0.726)	(0.689)	(0.501)	(0.211)
4 years old (ref: 4y before)	-0.46	-2.22	-0.53	-0.39	0.42	0.27	0.10	0.36
	(0.471)	(0.177)	(0.051)+	(0.131)	(0.710)	(0.791)	(0.743)	(0.242)
5 years old (ref: 4y before)	-0.00	-2.38	-0.40	-0.28	-0.09	0.73	-0.11	0.36
	(1.000)	(0.151)	(0.164)	(0.283)	(0.934)	(0.500)	(0.744)	(0.267)
6 years old (ref: 4y before)	0.24	-2.77	-0.33	-0.29	-0.26	0.21	-0.00	0.10
	(0.735)	(0.095)+	(0.268)	(0.292)	(0.826)	(0.848)	(0.990)	(0.766)
7 years old (ref: 4y before)	-0.20	-2.73	-0.46	-0.27	-0.08	0.11	-0.07	0.19
	(0.800)	(0.109)	(0.149)	(0.364)	(0.956)	(0.919)	(0.849)	(0.588)
8 years old (ref: 4y before)	-0.35	-2.40	-0.47	-0.27	-0.30	0.03	-0.04	0.27
	(0.669)	(0.167)	(0.150)	(0.366)	(0.817)	(0.981)	(0.909)	(0.460)

Table A–2: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a second child:								
9 years old (ref: 4y before)	-0.32	-2.39	-0.49	-0.34	0.64	0.50	-0.07	0.31
	(0.701)	(0.182)	(0.148)	(0.264)	(0.689)	(0.671)	(0.855)	(0.405)
10 years old (ref: 4y before)	-0.51	-1.73	-0.47	-0.21	0.22	0.80	0.19	0.32
	(0.551)	(0.384)	(0.178)	(0.508)	(0.874)	(0.510)	(0.616)	(0.409)
11 years old (ref: 4y before)	-0.19	-2.49	-0.35	-0.38	0.14	0.39	0.12	0.37
	(0.840)	(0.192)	(0.345)	(0.262)	(0.924)	(0.750)	(0.754)	(0.353)
12 years old (ref: 4y before)	-0.13	-2.08	-0.53	-0.43	0.30	1.02	0.10	0.41
	(0.888)	(0.284)	(0.153)	(0.213)	(0.831)	(0.414)	(0.801)	(0.310)
birth of the 1st child	-0.01	2.41	0.33	-0.07	0.02	1.25	0.17	0.15
	(0.981)	(0.006)*	(0.205)	(0.682)	(0.980)	(0.149)	(0.443)	(0.480)
1st child present	0.16	-2.25	-0.49	0.02	1.05	-1.10	-0.37	-0.36
	(0.823)	(0.063)+	(0.170)	(0.944)	(0.208)	(0.297)	(0.198)	(0.197)
birth of the 3rd child	-0.67	1.32	0.13	0.01	-1.16	-0.57	-0.01	0.30
	(0.144)	(0.164)	(0.544)	(0.973)	(0.084)+	(0.459)	(0.973)	(0.203)
3rd child present	0.39	-0.62	-0.13	-0.18	-0.19	0.96	-0.02	-0.39
	(0.365)	(0.483)	(0.534)	(0.298)	(0.794)	(0.237)	(0.949)	(0.078)+
birth of the 4th child	0.08	1.79	0.04	0.32	-0.96	-0.97	-0.76	-0.69
	(0.962)	(0.252)	(0.923)	(0.415)	(0.502)	(0.676)	(0.024)*	(0.027)*
4th child present	0.83	-0.86	-0.50	-0.46	0.85	-1.63	0.85	0.51
	(0.545)	(0.609)	(0.187)	(0.162)	(0.557)	(0.243)	(0.039)*	(0.032)*
birth of the 5th child	0.50	0.10	0.13	-0.53	-2.96	1.50	-2.45	-3.43
	(0.688)	(0.925)	(0.608)	(0.090)+	(0.374)	(0.475)	(0.245)	(0.070)+
5th child present	0.97	-2.55	-0.49	-0.24	4.48	-4.02	1.85	2.84
	(0.593)	(0.204)	(0.555)	(0.808)	(0.157)	(0.265)	(0.437)	(0.153)
age	-0.13	-0.06	0.06	0.03	-0.00	-0.13	0.04	0.03
	(0.014)*	(0.562)	(0.009)*	(0.172)	(0.975)	(0.046)*	(0.141)	(0.181)
age^2	0.00	0.01	0.00	-0.00	-0.00	-0.00	0.00	0.00
	(0.135)	(0.070)+	(0.674)	(0.982)	(0.263)	(0.411)	(0.045)*	(0.352)
never married (ref: married)	-1.34	0.01	-0.00	0.03	-0.81	0.36	-0.12	0.11
	(0.000)***	(0.993)	(0.999)	(0.835)	(0.086)+	(0.488)	(0.474)	(0.452)
divorced or separated (ref: married)	-1.12	-1.13	0.16	0.25	-0.68	0.00	-0.09	-0.10
	(0.003)*	(0.229)	(0.453)	(0.209)	(0.161)	(1.000)	(0.697)	(0.637)
widowed (ref: married)	-0.08	0.05	0.51	0.31	4.36	-0.66	0.64	0.29
	(0.938)	(0.989)	(0.411)	(0.617)	(0.177)	(0.685)	(0.136)	(0.395)
year of divorce	-1.26	-0.64	0.25	0.68	-0.08	-0.69	-0.32	0.08
	(0.002)*	(0.442)	(0.300)	(0.004)*	(0.920)	(0.363)	(0.288)	(0.745)
year of marriage	-0.43	-0.65	-0.11	-0.20	-0.06	0.50	-0.03	0.05
	(0.180)	(0.312)	(0.403)	(0.125)	(0.863)	(0.238)	(0.868)	(0.715)
co-resides with grandparents	0.52	-1.06	-0.56	0.02	-1.28	-0.15	0.31	-0.33
	(0.631)	(0.470)	(0.245)	(0.964)	(0.208)	(0.898)	(0.499)	(0.380)
health satisfaction	0.10	0.18	0.04	0.06	0.05	-0.07	0.04	0.04
	(0.035)*	(0.003)*	(0.019)*	(0.000)***	(0.292)	(0.189)	(0.040)*	(0.037)*
household income	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.957)	(0.806)	(0.052)+	(0.241)	(0.429)	(0.464)	(0.993)	(0.265)
unemployed (ref: employed or inactive)	-0.35	-0.23	-0.07	0.09	0.44	0.87	-0.02	0.12
	(0.435)	(0.762)	(0.736)	(0.663)	(0.327)	(0.047)*	(0.913)	(0.545)
waves 2–3 (ref: waves 7–9)	-0.46	-0.03	0.02	0.04	0.16	-0.48	-0.02	0.12
	(0.087)+	(0.955)	(0.859)	(0.682)	(0.635)	(0.164)	(0.860)	(0.338)
waves 4–6 (ref: waves 7–9)	-0.22	0.12	0.05	0.00	0.21	0.07	0.03	0.06
	(0.191)	(0.643)	(0.452)	(0.949)	(0.324)	(0.749)	(0.652)	(0.447)
waves 10–12 (ref: waves 7–9)	-0.17	0.06	-0.18	-0.13	-0.33	0.28	-0.13	-0.13
	(0.378)	(0.865)	(0.017)*	(0.066)+	(0.124)	(0.188)	(0.087)+	(0.090)+
Adjusted R^2	0.007	0.005	0.003	0.004	0.005	0.004	0.002	0.001
N(id)	3535	3535	3529	3528	3871	3870	3868	3863
Observations	15077	15065	15029	15008	15843	15825	15744	15725

[a] times per month

[b] on a scale from 0 – *not at all* to 10 – *a great deal*

$+p < 0.1;\ *p < 0.05;\ ***p < 0.000$; p-values in parentheses;

Source: SHP data, waves 2–12.

Note: Fixed-effect estimates with clustered standard errors. Sample consists of women aged 25–50 years and men aged 25–60 years, including parents with a second child under the age of 13 and a reference group (persons with one child and childless people).

Table A–3: Predictors of dynamics of relationships with relatives, third child

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a third child:								
3 years before birth (ref: 4y before)	0.42	-0.26	0.09	-0.36	-1.59	-1.47	-0.39	-0.12
	(0.390)	(0.811)	(0.696)	(0.074)+	(0.019)*	(0.067)+	(0.086)+	(0.572)
2 years before birth (ref: 4y before)	0.77	0.29	0.10	-0.05	0.38	-0.16	-0.05	-0.15
	(0.120)	(0.766)	(0.625)	(0.787)	(0.615)	(0.838)	(0.858)	(0.519)
1 year before birth (ref: 4y before)	-0.32	0.16	-0.07	0.02	-1.54	-1.27	-0.24	-0.31
	(0.495)	(0.869)	(0.753)	(0.906)	(0.046)*	(0.099)+	(0.304)	(0.183)
birth (ref: 4y before)	-0.40	1.09	0.22	0.01	-1.38	-0.88	-0.15	-0.02
	(0.458)	(0.313)	(0.390)	(0.972)	(0.066)+	(0.364)	(0.557)	(0.936)
1 years old (ref: 4y before)	-0.17	1.59	0.53	0.07	-1.72	-0.76	-0.32	-0.44
	(0.791)	(0.154)	(0.045)*	(0.737)	(0.054)+	(0.474)	(0.239)	(0.086)+
2 years old (ref: 4y before)	-0.42	0.34	-0.09	-0.14	-2.05	-0.03	-0.25	-0.31
	(0.511)	(0.740)	(0.712)	(0.563)	(0.027)*	(0.981)	(0.357)	(0.250)
3 years old (ref: 4y before)	-0.19	-0.34	-0.09	-0.29	-2.88	1.52	-0.28	-0.54
	(0.775)	(0.756)	(0.729)	(0.230)	(0.002)*	(0.277)	(0.377)	(0.070)+
4 years old (ref: 4y before)	0.19	-0.50	-0.00	-0.46	-2.19	0.64	-0.44	-0.38
	(0.790)	(0.692)	(0.996)	(0.074)+	(0.038)*	(0.573)	(0.157)	(0.182)
5 years old (ref: 4y before)	-0.51	-0.68	0.01	-0.43	-2.57	0.15	-0.27	-0.33
	(0.460)	(0.574)	(0.973)	(0.111)	(0.016)*	(0.889)	(0.397)	(0.278)
6 years old (ref: 4y before)	0.87	-0.08	-0.26	-0.62	-2.35	0.04	-0.42	-0.69
	(0.251)	(0.952)	(0.403)	(0.030)*	(0.035)*	(0.970)	(0.229)	(0.031)*
7 years old (ref: 4y before)	-0.35	-0.43	-0.16	-0.55	-3.43	-0.37	-0.41	-0.62
	(0.645)	(0.749)	(0.594)	(0.049)*	(0.002)*	(0.737)	(0.222)	(0.051)+
8 years old (ref: 4y before)	-0.05	-1.59	-0.04	-0.61	-2.31	-0.85	-0.47	-0.44
	(0.945)	(0.248)	(0.896)	(0.037)*	(0.049)*	(0.438)	(0.174)	(0.172)
9 years old (ref: 4y before)	-0.27	-1.99	-0.21	-0.72	-1.22	-0.82	-0.49	-0.68
	(0.743)	(0.146)	(0.534)	(0.017)*	(0.486)	(0.469)	(0.165)	(0.038)*
10 years old (ref: 4y before)	-1.11	-1.39	-0.28	-0.73	-2.32	-0.63	-0.38	-0.43
	(0.176)	(0.316)	(0.398)	(0.014)*	(0.051)+	(0.578)	(0.299)	(0.208)
11 years old (ref: 4y before)	-0.19	-1.66	-0.04	-0.70	-2.33	-0.94	-0.65	-0.83
	(0.827)	(0.231)	(0.919)	(0.023)*	(0.063)+	(0.422)	(0.084)+	(0.020)*
12 years old (ref: 4y before)	-1.49	-1.62	-0.59	-0.82	-2.18	-0.42	-0.69	-1.02
	(0.082)+	(0.251)	(0.108)	(0.010)*	(0.107)	(0.723)	(0.074)+	(0.004)*
birth of the 1st child	-0.05	2.36	0.33	-0.08	0.12	1.31	0.20	0.16
	(0.934)	(0.007)*	(0.205)	(0.678)	(0.866)	(0.130)	(0.391)	(0.443)
1st child present	0.33	-2.44	-0.58	-0.10	0.57	-1.40	-0.46	-0.35
	(0.610)	(0.016)*	(0.057)+	(0.642)	(0.437)	(0.133)	(0.071)+	(0.135)
birth of the 2nd child	-0.24	1.36	0.22	0.02	-0.05	0.61	-0.05	-0.01
	(0.691)	(0.151)	(0.441)	(0.951)	(0.932)	(0.507)	(0.859)	(0.982)
2nd child present	-0.75	-1.33	-0.70	-0.32	0.50	-1.29	0.11	-0.06
	(0.324)	(0.260)	(0.041)*	(0.287)	(0.485)	(0.197)	(0.738)	(0.841)
birth of the 4th child	-0.31	1.60	0.12	0.35	-0.84	-1.14	-0.68	-0.54
	(0.846)	(0.301)	(0.772)	(0.367)	(0.493)	(0.615)	(0.052)+	(0.083)+
4th child present	0.72	-0.01	-0.37	-0.31	0.94	-1.18	0.95	0.55
	(0.603)	(0.995)	(0.319)	(0.348)	(0.442)	(0.357)	(0.028)*	(0.023)*
birth of the 5th child	-0.09	-1.38	-0.15	-0.91	-2.18	0.09	-2.53	-3.49
	(0.968)	(0.411)	(0.796)	(0.174)	(0.281)	(0.974)	(0.235)	(0.051)+
5th child present	3.22	2.18	-0.26	0.26	3.05	-0.43	1.90	2.91
	(0.297)	(0.393)	(0.607)	(0.567)	(0.076)+	(0.859)	(0.390)	(0.092)+
age	-0.13	-0.09	0.06	0.04	-0.03	-0.15	0.06	0.04
	(0.021)*	(0.297)	(0.005)*	(0.060)+	(0.539)	(0.021)*	(0.017)*	(0.077)+
age^2	0.00	0.00	0.00	-0.00	-0.00	-0.00	0.00	0.00
	(0.317)	(0.243)	(0.704)	(0.712)	(0.129)	(0.767)	(0.006)*	(0.070)+
never married (ref: married)	-1.29	0.02	0.01	0.06	-0.84	0.39	-0.04	0.18
	(0.000)***	(0.972)	(0.927)	(0.642)	(0.071)+	(0.444)	(0.822)	(0.251)
divorced or separated (ref: married)	-1.07	-1.00	0.15	0.22	-0.76	0.10	-0.20	-0.06
	(0.002)*	(0.195)	(0.428)	(0.207)	(0.063)+	(0.852)	(0.322)	(0.753)
widowed (ref: married)	-1.69	-0.56	-0.07	-0.01	2.48	1.86	1.39	1.23
	(0.250)	(0.814)	(0.920)	(0.983)	(0.365)	(0.394)	(0.024)*	(0.058)+
year of divorce	-1.27	-0.86	0.10	0.41	-0.28	-0.28	-0.33	0.09
	(0.001)***	(0.236)	(0.663)	(0.077)+	(0.705)	(0.688)	(0.195)	(0.659)
year of marriage	-0.36	-0.63	-0.10	-0.16	-0.05	0.54	0.05	0.09
	(0.250)	(0.314)	(0.439)	(0.206)	(0.880)	(0.183)	(0.723)	(0.540)
co-resides with grandparents	-0.22	-0.81	-0.03	0.26	0.10	0.17	-0.22	0.16
	(0.725)	(0.362)	(0.933)	(0.199)	(0.871)	(0.813)	(0.436)	(0.553)
health satisfaction	0.05	0.14	0.03	0.05	0.05	-0.09	0.03	0.02
	(0.239)	(0.008)*	(0.029)*	(0.000)***	(0.259)	(0.054)+	(0.161)	(0.181)

Table A–3: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a third child:								
household income	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.866)	(0.847)	(0.172)	(0.281)	(0.533)	(0.485)	(0.649)	(0.116)
unemployed (ref: employed or inactive)	-0.14	-0.33	-0.01	0.09	0.26	0.81	-0.07	0.06
	(0.733)	(0.649)	(0.974)	(0.655)	(0.534)	(0.066)+	(0.729)	(0.770)
waves 2–3 (ref: waves 7–9)	-0.45	-0.23	0.06	0.07	-0.03	-0.51	0.03	0.14
	(0.124)	(0.621)	(0.575)	(0.489)	(0.924)	(0.111)	(0.807)	(0.217)
waves 4–6 (ref: waves 7–9)	-0.20	0.08	0.08	0.03	0.09	0.13	0.07	0.09
	(0.269)	(0.741)	(0.270)	(0.614)	(0.626)	(0.500)	(0.320)	(0.198)
waves 10–12 (ref: waves 7–9)	-0.25	-0.06	-0.17	-0.15	-0.26	0.41	-0.20	-0.12
	(0.180)	(0.856)	(0.012)*	(0.017)*	(0.167)	(0.031)*	(0.005)*	(0.099)+
Adjusted R^2	0.006	0.004	0.004	0.003	0.007	0.005	0.004	0.002
N(id)	3938	3937	3932	3931	4270	4269	4264	4261
Observations	17744	17729	17690	17671	18613	18595	18494	18471

[a] times per month

[b] on a scale from 0 – *not at all* to 10 – *a great deal*

$+p < 0.1;\ *p < 0.05;\ ***p < 0.000$; *p*-values in parentheses;

Source: SHP data, waves 2–12.

Note: Fixed-effect estimates with clustered standard errors. Sample consists of women aged 25–50 years and men aged 25–60 years, including parents with a third child under the age of 13 and a reference group (persons with one or two children, and childless people).

Predictors of dynamics of life satisfaction during parenthood among parents with stronger and weaker relationships with relatives

Table A–4: Predictors of dynamics of life satisfaction, first child

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a first child:								
4 years before birth				*reference category*				
3 years before birth	0.23	0.28	0.35	0.39	-0.06	-0.04	-0.07	-0.10
	(0.121)	(0.225)	(0.239)	(0.059)+	(0.643)	(0.732)	(0.636)	(0.431)
3 years before birth x strong rel.	-0.19	-0.18	-0.26	-0.38	-0.10	-0.10	-0.07	-0.02
	(0.322)	(0.485)	(0.410)	(0.098)+	(0.571)	(0.558)	(0.709)	(0.896)
2 years before birth	0.06	-0.05	0.31	0.12	-0.08	-0.03	0.01	-0.11
	(0.663)	(0.827)	(0.205)	(0.504)	(0.428)	(0.804)	(0.927)	(0.343)
2 years before birth x strong rel.	-0.17	0.02	-0.40	-0.24	0.14	0.05	-0.03	0.20
	(0.361)	(0.929)	(0.127)	(0.249)	(0.362)	(0.770)	(0.857)	(0.196)
1 year before birth	0.36	0.45	0.59	0.43	-0.07	0.11	-0.11	-0.13
	(0.018)*	(0.047)*	(0.021)*	(0.015)*	(0.517)	(0.368)	(0.542)	(0.388)
1 year before birth x strong rel.	-0.24	-0.26	-0.43	-0.33	0.13	-0.16	0.16	0.23
	(0.206)	(0.281)	(0.108)	(0.104)	(0.426)	(0.340)	(0.420)	(0.194)
birth	0.68	0.95	1.09	1.01	-0.04	0.15	-0.12	-0.03
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.774)	(0.284)	(0.581)	(0.879)
birth x strong relationships	-0.22	-0.48	-0.66	-0.70	0.08	-0.22	0.18	0.04
	(0.288)	(0.035)*	(0.013)*	(0.002)*	(0.669)	(0.231)	(0.446)	(0.822)
1 years old	0.33	0.60	0.49	0.49	-0.10	0.09	-0.25	-0.23
	(0.089)+	(0.002)*	(0.036)*	(0.033)*	(0.507)	(0.572)	(0.227)	(0.127)
1 years old x strong relationships	-0.16	-0.44	-0.32	-0.40	-0.04	-0.32	0.16	0.16
	(0.460)	(0.046)*	(0.204)	(0.097)+	(0.824)	(0.096)+	(0.445)	(0.384)
2 years old	0.13	0.66	0.55	0.33	-0.28	-0.29	-0.29	-0.18
	(0.484)	(0.007)*	(0.020)*	(0.130)	(0.108)	(0.115)	(0.192)	(0.301)
2 years old x strong relationships	-0.02	-0.66	-0.56	-0.34	0.18	0.17	0.17	0.00
	(0.935)	(0.011)*	(0.028)*	(0.151)	(0.378)	(0.412)	(0.462)	(0.999)
3 years old	0.10	0.35	0.51	0.36	-0.32	-0.30	-0.21	-0.24
	(0.608)	(0.176)	(0.042)*	(0.115)	(0.101)	(0.143)	(0.365)	(0.224)
3 years old x strong relationships	-0.14	-0.40	-0.62	-0.54	0.21	0.17	0.02	0.08
	(0.571)	(0.152)	(0.025)*	(0.035)*	(0.353)	(0.462)	(0.925)	(0.711)
4 years old	0.19	0.56	0.74	0.53	-0.26	-0.34	-0.30	-0.23
	(0.376)	(0.023)*	(0.007)*	(0.027)*	(0.187)	(0.112)	(0.206)	(0.258)
4 years old x strong relationships	-0.10	-0.51	-0.77	-0.63	0.02	0.15	0.06	-0.07
	(0.696)	(0.060)+	(0.009)*	(0.019)*	(0.932)	(0.536)	(0.808)	(0.765)
5 years old	0.23	0.25	0.57	0.40	-0.25	-0.41	-0.32	-0.38
	(0.295)	(0.375)	(0.036)*	(0.103)	(0.244)	(0.082)+	(0.199)	(0.078)+
5 years old x strong relationships	-0.27	-0.21	-0.63	-0.51	-0.16	0.11	-0.06	0.08
	(0.295)	(0.472)	(0.032)*	(0.060)+	(0.527)	(0.680)	(0.820)	(0.759)
6 years old	0.34	0.27	0.56	0.42	-0.34	-0.37	-0.41	-0.47
	(0.135)	(0.338)	(0.040)*	(0.093)+	(0.106)	(0.121)	(0.100)	(0.033)*
6 years old x strong relationships	-0.40	-0.19	-0.56	-0.48	0.02	0.06	0.11	0.30
	(0.149)	(0.527)	(0.062)+	(0.095)+	(0.950)	(0.816)	(0.685)	(0.230)
7 years old	0.34	0.35	0.69	0.53	-0.33	-0.53	-0.50	-0.42
	(0.139)	(0.229)	(0.018)*	(0.044)*	(0.134)	(0.025)*	(0.055)+	(0.068)+
7 years old x strong relationships	-0.25	-0.19	-0.61	-0.51	-0.00	0.30	0.26	0.17
	(0.369)	(0.543)	(0.051)+	(0.085)+	(0.991)	(0.261)	(0.346)	(0.514)
8 years old	0.38	0.50	0.82	0.65	-0.32	-0.43	-0.42	-0.38
	(0.108)	(0.083)+	(0.004)*	(0.014)*	(0.160)	(0.084)+	(0.111)	(0.101)
8 years old x strong relationships	-0.35	-0.40	-0.83	-0.75	-0.03	0.14	0.11	0.08
	(0.203)	(0.192)	(0.007)*	(0.010)*	(0.901)	(0.603)	(0.696)	(0.772)
9 years old	0.30	0.31	0.77	0.55	-0.26	-0.47	-0.41	-0.43
	(0.212)	(0.295)	(0.008)*	(0.039)*	(0.277)	(0.059)+	(0.125)	(0.068)+
9 years old x strong relationships	-0.26	-0.19	-0.80	-0.62	-0.17	0.17	0.06	0.15
	(0.345)	(0.543)	(0.009)*	(0.033)*	(0.524)	(0.530)	(0.836)	(0.563)
10 years old	0.16	0.18	0.70	0.48	-0.30	-0.42	-0.37	-0.37
	(0.520)	(0.551)	(0.019)*	(0.080)+	(0.215)	(0.094)+	(0.171)	(0.121)
10 years old x strong relationships	-0.07	-0.07	-0.74	-0.56	-0.02	0.17	0.07	0.11
	(0.799)	(0.827)	(0.017)*	(0.059)+	(0.940)	(0.544)	(0.818)	(0.664)
11 years old	0.31	0.28	0.68	0.51	-0.27	-0.44	-0.44	-0.39
	(0.212)	(0.362)	(0.025)*	(0.065)+	(0.261)	(0.088)+	(0.105)	(0.106)
11 years old x strong relationships	-0.29	-0.16	-0.67	-0.56	-0.10	0.16	0.17	0.11
	(0.304)	(0.618)	(0.035)*	(0.061)+	(0.712)	(0.565)	(0.549)	(0.673)

Table A–4: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
12 years old	0.24	0.43	0.76	0.54	-0.28	-0.46	-0.35	-0.32
	(0.340)	(0.169)	(0.012)*	(0.056)+	(0.258)	(0.088)+	(0.211)	(0.207)
12 years old x strong relationships	-0.24	-0.40	-0.85	-0.67	0.01	0.29	0.09	0.05
	(0.409)	(0.209)	(0.006)*	(0.023)*	(0.984)	(0.321)	(0.773)	(0.863)
birth: 2nd child	0.20	0.11	-0.09	0.11	0.10	0.18	0.21	0.02
	(0.100)	(0.550)	(0.573)	(0.418)	(0.434)	(0.201)	(0.154)	(0.896)
birth: 2nd child x strong rel.	-0.08	0.08	0.33	0.07	-0.13	-0.23	-0.31	0.00
	(0.636)	(0.705)	(0.071)+	(0.664)	(0.450)	(0.190)	(0.091)+	(0.996)
2nd child present	-0.28	-0.14	-0.28	-0.23	-0.16	-0.09	-0.15	-0.00
	(0.036)*	(0.489)	(0.101)	(0.098)+	(0.176)	(0.500)	(0.293)	(0.987)
2nd child present x strong rel.	0.13	-0.10	0.07	0.01	0.27	0.13	0.25	0.01
	(0.469)	(0.648)	(0.716)	(0.949)	(0.102)	(0.439)	(0.151)	(0.973)
birth: 3rd child	0.18	0.41	0.60	0.37	0.21	0.52	0.43	0.31
	(0.414)	(0.235)	(0.049)*	(0.079)+	(0.360)	(0.094)+	(0.044)*	(0.066)+
birth: 3rd child x strong rel.	-0.02	-0.28	-0.57	-0.35	0.16	-0.30	-0.24	0.01
	(0.944)	(0.451)	(0.094)+	(0.193)	(0.565)	(0.375)	(0.342)	(0.980)
3rd child present	-0.09	-0.30	-0.35	-0.42	-0.44	-0.67	-0.49	-0.32
	(0.674)	(0.434)	(0.259)	(0.033)*	(0.099)+	(0.051)+	(0.036)*	(0.084)+
3rd child present x strong rel.	0.01	0.24	0.34	0.53	0.31	0.57	0.46	0.18
	(0.971)	(0.565)	(0.321)	(0.042)*	(0.315)	(0.118)	(0.090)+	(0.491)
birth: 4th child	-0.33	-1.91	-0.76	-0.43	-0.35	-0.27	-0.31	-0.18
	(0.532)	(0.010)*	(0.130)	(0.255)	(0.098)+	(0.210)	(0.144)	(0.271)
birth: 4th child x strong rel.	0.37	1.98	0.95	0.64	0.13	0.07	0.06	-0.50
	(0.525)	(0.010)*	(0.093)+	(0.167)	(0.691)	(0.829)	(0.869)	(0.235)
4th child present	-0.83	0.63	-0.12	-0.05	0.23	0.36	0.18	0.07
	(0.390)	(0.399)	(0.791)	(0.877)	(0.244)	(0.070)+	(0.343)	(0.657)
4th child present x strong rel.	0.75	-0.78	-0.02	-0.15	-0.07	-0.41	0.01	0.50
	(0.450)	(0.305)	(0.966)	(0.716)	(0.826)	(0.129)	(0.988)	(0.241)
age	-0.01	-0.01	-0.01	-0.01	-0.00	-0.01	-0.01	-0.00
	(0.604)	(0.617)	(0.599)	(0.609)	(0.712)	(0.673)	(0.670)	(0.700)
age^2	0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
	(0.557)	(0.555)	(0.591)	(0.642)	(0.654)	(0.669)	(0.678)	(0.653)
never married	-0.06	-0.07	-0.08	-0.09	-0.23	-0.23	-0.23	-0.23
	(0.462)	(0.388)	(0.326)	(0.297)	(0.003)*	(0.002)*	(0.002)*	(0.002)*
divorced or separated	0.13	0.15	0.15	0.14	-0.07	-0.07	-0.07	-0.07
	(0.353)	(0.297)	(0.298)	(0.314)	(0.639)	(0.647)	(0.656)	(0.648)
year of divorce	-0.25	-0.25	-0.26	-0.26	-0.87	-0.87	-0.88	-0.88
	(0.222)	(0.224)	(0.217)	(0.212)	(0.001)***	(0.001)***	(0.001)***	(0.001)***
year of marriage	0.08	0.07	0.07	0.07	-0.04	-0.03	-0.04	-0.05
	(0.288)	(0.350)	(0.347)	(0.333)	(0.527)	(0.623)	(0.529)	(0.488)
widowed	-1.20	-1.12	-1.06	-1.04	-0.69	-0.69	-0.69	-0.71
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.139)	(0.131)	(0.131)	(0.110)
health satisfaction	0.15	0.15	0.15	0.15	0.13	0.13	0.13	0.13
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
household income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.038)*	(0.036)*	(0.039)*	(0.031)*	(0.022)*	(0.018)*	(0.019)*	(0.019)*
unemployed	-0.26	-0.26	-0.25	-0.26	-0.67	-0.66	-0.66	-0.66
	(0.094)+	(0.102)	(0.113)	(0.098)+	(0.000)***	(0.000)***	(0.000)***	(0.000)***
support from partner	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
support from neighbors	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
	(0.295)	(0.305)	(0.339)	(0.326)	(0.180)	(0.147)	(0.152)	(0.144)
support from colleages	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00
	(0.257)	(0.252)	(0.245)	(0.260)	(0.607)	(0.634)	(0.638)	(0.669)
support from friends	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00
	(0.007)*	(0.006)*	(0.007)*	(0.005)*	(0.548)	(0.542)	(0.519)	(0.573)
waves 2–3	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19
	(0.005)*	(0.005)*	(0.004)*	(0.003)*	(0.003)*	(0.004)*	(0.003)*	(0.003)*
waves 4–6	0.13	0.13	0.13	0.13	0.07	0.07	0.07	0.07
	(0.002)*	(0.002)*	(0.001)*	(0.001)*	(0.071)+	(0.082)+	(0.081)+	(0.076)+
waves 10–12	0.02	0.02	0.02	0.02	0.05	0.05	0.05	0.05
	(0.725)	(0.742)	(0.711)	(0.715)	(0.243)	(0.257)	(0.222)	(0.257)
Adjusted R^2	0.075	0.076	0.077	0.076	0.060	0.061	0.060	0.060
N(id)	3031	3031	3031	3031	3333	3333	3333	3333
Observations	11664	11664	11664	11664	12423	12423	12423	12423

[a] times per month; [b] on a scale from 0 – *not at all* to 10 – *a great deal*; $+p < 0.1$; $*p < 0.05$; $***p < 0.000$; p-values in parentheses;
Source: SHP data, waves 2–12.
Note: Fixed-effect estimates with clustered standard errors. Sample consists of women aged 25–50 years and men aged 25–60 years, including parents with a first child under the age of 13 and a reference group (childless people).

Table A–5: Predictors of dynamics of life satisfaction, second child

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a second child:								
4 years before birth				*reference category*				
3 years before birth	0.14	-0.19	-0.07	0.13	-0.07	-0.02	0.06	-0.04
	(0.349)	(0.350)	(0.696)	(0.431)	(0.553)	(0.903)	(0.737)	(0.785)
3 years before birth x strong rel.	-0.24	0.23	0.10	-0.17	0.15	0.05	-0.08	0.06
	(0.192)	(0.305)	(0.592)	(0.381)	(0.397)	(0.765)	(0.699)	(0.742)
2 years before birth	0.10	0.24	-0.16	0.14	-0.07	0.14	0.20	0.08
	(0.530)	(0.212)	(0.400)	(0.467)	(0.634)	(0.367)	(0.300)	(0.587)
2 years before birth x strong rel.	-0.28	-0.34	0.13	-0.30	0.29	-0.06	-0.17	-0.01
	(0.170)	(0.120)	(0.545)	(0.190)	(0.148)	(0.764)	(0.446)	(0.971)
1 year before birth	-0.08	0.18	-0.40	-0.04	-0.09	0.26	0.26	0.14
	(0.628)	(0.356)	(0.036)*	(0.806)	(0.615)	(0.095)+	(0.235)	(0.366)
1 year before birth x strong rel.	0.02	-0.29	0.46	-0.01	0.32	-0.23	-0.25	-0.13
	(0.925)	(0.202)	(0.041)*	(0.981)	(0.146)	(0.265)	(0.316)	(0.554)
birth	0.09	0.22	-0.37	0.11	0.04	0.41	0.44	0.20
	(0.578)	(0.319)	(0.061)+	(0.567)	(0.845)	(0.029)*	(0.082)+	(0.317)
birth x strong relationships	-0.15	-0.24	0.53	-0.15	0.24	-0.34	-0.42	-0.11
	(0.515)	(0.361)	(0.029)*	(0.547)	(0.344)	(0.166)	(0.145)	(0.681)
1 years old	-0.28	-0.11	-0.70	-0.17	-0.12	0.37	0.28	0.17
	(0.137)	(0.697)	(0.004)*	(0.379)	(0.525)	(0.094)+	(0.248)	(0.410)
1 years old x strong relationships	0.13	-0.12	0.67	-0.04	0.48	-0.33	-0.16	-0.07
	(0.623)	(0.704)	(0.021)*	(0.875)	(0.078)+	(0.240)	(0.584)	(0.807)
2 years old	-0.11	0.03	-0.45	-0.06	0.03	0.50	0.34	0.22
	(0.569)	(0.923)	(0.049)*	(0.782)	(0.894)	(0.028)*	(0.190)	(0.325)
2 years old x strong relationships	-0.04	-0.17	0.43	-0.10	0.42	-0.37	-0.10	0.03
	(0.896)	(0.571)	(0.140)	(0.734)	(0.189)	(0.238)	(0.763)	(0.923)
3 years old	-0.20	-0.15	-0.57	-0.25	-0.19	0.31	0.26	0.11
	(0.333)	(0.608)	(0.018)*	(0.295)	(0.394)	(0.200)	(0.331)	(0.640)
3 years old x strong relationships	0.00	-0.05	0.50	0.12	0.60	-0.24	-0.14	0.08
	(0.998)	(0.882)	(0.107)	(0.695)	(0.085)+	(0.489)	(0.707)	(0.835)
4 years old	-0.39	0.08	-0.73	-0.34	0.09	0.56	0.38	0.21
	(0.085)+	(0.780)	(0.004)*	(0.158)	(0.696)	(0.030)*	(0.165)	(0.370)
4 years old x strong relationships	0.10	-0.49	0.54	0.03	0.19	-0.54	-0.29	-0.10
	(0.749)	(0.159)	(0.102)	(0.919)	(0.579)	(0.126)	(0.443)	(0.794)
5 years old	-0.24	0.07	-0.53	-0.20	-0.09	0.46	0.21	0.01
	(0.323)	(0.826)	(0.041)*	(0.416)	(0.706)	(0.105)	(0.477)	(0.961)
5 years old x strong relationships	0.02	-0.35	0.41	-0.02	0.27	-0.58	-0.20	0.07
	(0.959)	(0.339)	(0.241)	(0.953)	(0.455)	(0.120)	(0.609)	(0.865)
6 years old	-0.32	-0.03	-0.61	-0.24	-0.03	0.56	0.31	0.06
	(0.194)	(0.925)	(0.025)*	(0.364)	(0.908)	(0.047)*	(0.305)	(0.814)
6 years old x strong relationships	0.15	-0.24	0.50	0.02	0.38	-0.54	-0.14	0.27
	(0.681)	(0.536)	(0.170)	(0.956)	(0.319)	(0.158)	(0.742)	(0.505)
7 years old	-0.39	-0.16	-0.75	-0.38	-0.01	0.53	0.34	0.06
	(0.137)	(0.631)	(0.009)*	(0.160)	(0.984)	(0.077)+	(0.276)	(0.832)
7 years old x strong relationships	0.22	-0.11	0.67	0.24	0.40	-0.44	-0.12	0.36
	(0.556)	(0.793)	(0.078)+	(0.536)	(0.324)	(0.278)	(0.779)	(0.401)
8 years old	-0.62	-0.32	-0.80	-0.48	0.00	0.64	0.29	-0.03
	(0.024)*	(0.359)	(0.006)*	(0.088)+	(0.987)	(0.034)*	(0.353)	(0.925)
8 years old x strong relationships	0.35	-0.11	0.51	0.12	0.34	-0.67	-0.06	0.51
	(0.362)	(0.792)	(0.192)	(0.764)	(0.408)	(0.109)	(0.893)	(0.252)
9 years old	-0.46	-0.05	-0.71	-0.41	-0.06	0.63	0.21	-0.10
	(0.117)	(0.884)	(0.019)*	(0.162)	(0.807)	(0.034)*	(0.510)	(0.717)
9 years old x strong relationships	0.23	-0.34	0.51	0.17	0.44	-0.70	0.07	0.66
	(0.568)	(0.431)	(0.211)	(0.687)	(0.293)	(0.098)+	(0.875)	(0.157)
10 years old	-0.46	0.01	-0.74	-0.48	-0.06	0.64	0.30	0.00
	(0.129)	(0.987)	(0.018)*	(0.112)	(0.812)	(0.038)*	(0.356)	(0.991)
10 years old x strong relationships	0.22	-0.42	0.54	0.29	0.54	-0.59	0.01	0.55
	(0.604)	(0.348)	(0.202)	(0.495)	(0.208)	(0.180)	(0.982)	(0.263)
11 years old	-0.52	0.08	-0.78	-0.49	-0.21	0.41	0.14	-0.14
	(0.107)	(0.834)	(0.015)*	(0.113)	(0.408)	(0.183)	(0.676)	(0.618)
11 years old x strong relationships	0.22	-0.59	0.51	0.21	0.61	-0.38	0.10	0.60
	(0.606)	(0.209)	(0.245)	(0.630)	(0.161)	(0.393)	(0.833)	(0.231)
12 years old	-0.56	-0.06	-0.82	-0.54	-0.03	0.58	0.31	0.04
	(0.090)+	(0.885)	(0.012)*	(0.087)+	(0.902)	(0.068)+	(0.338)	(0.894)
12 years old x strong relationships	0.19	-0.49	0.47	0.18	0.61	-0.36	0.11	0.60
	(0.662)	(0.304)	(0.287)	(0.695)	(0.162)	(0.422)	(0.822)	(0.232)

Table A–5: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
birth: 1st child	0.16	-0.12	0.55	0.18	-0.17	-0.16	-0.09	0.02
	(0.414)	(0.642)	(0.106)	(0.486)	(0.326)	(0.348)	(0.740)	(0.922)
birth: 1st child x strong rel.	-0.06	0.29	-0.52	-0.12	0.14	0.12	0.03	-0.19
	(0.803)	(0.320)	(0.147)	(0.686)	(0.554)	(0.597)	(0.926)	(0.447)
1st child present	0.13	0.49	-0.34	-0.04	-0.02	-0.07	0.11	-0.03
	(0.671)	(0.248)	(0.415)	(0.920)	(0.939)	(0.769)	(0.740)	(0.916)
1st child present x strong rel.	-0.28	-0.62	0.33	-0.00	0.28	0.27	-0.08	0.19
	(0.458)	(0.186)	(0.467)	(1.000)	(0.394)	(0.394)	(0.830)	(0.577)
birth: 3rd child	0.16	0.35	0.56	0.39	0.20	0.55	0.48	0.36
	(0.480)	(0.252)	(0.061)+	(0.071)+	(0.411)	(0.076)+	(0.031)*	(0.051)+
birth: 3rd child x strong rel.	0.01	-0.22	-0.52	-0.40	0.22	-0.30	-0.30	-0.04
	(0.968)	(0.509)	(0.120)	(0.144)	(0.444)	(0.382)	(0.263)	(0.868)
3rd child present	-0.06	-0.34	-0.27	-0.35	-0.49	-0.74	-0.60	-0.37
	(0.775)	(0.302)	(0.359)	(0.067)+	(0.064)+	(0.028)*	(0.009)*	(0.054)+
3rd child present x strong rel.	-0.04	0.30	0.26	0.46	0.36	0.62	0.63	0.20
	(0.890)	(0.391)	(0.431)	(0.066)+	(0.239)	(0.087)+	(0.018)*	(0.442)
birth: 4th child	-0.59	-2.06	-0.62	-0.36	-0.37	-0.14	-0.27	-0.14
	(0.387)	(0.010)*	(0.198)	(0.329)	(0.092)+	(0.536)	(0.264)	(0.429)
birth: 4th child x strong rel.	0.68	2.14	0.80	0.54	0.30	-0.14	0.00	-0.56
	(0.352)	(0.010)*	(0.142)	(0.240)	(0.330)	(0.662)	(0.989)	(0.157)
4th child present	-0.38	0.96	-0.27	-0.10	0.18	0.21	0.03	-0.06
	(0.594)	(0.015)*	(0.537)	(0.765)	(0.347)	(0.309)	(0.865)	(0.689)
4th child present x strong rel.	0.24	-1.13	0.20	-0.08	-0.14	-0.37	0.12	0.66
	(0.746)	(0.008)*	(0.678)	(0.839)	(0.618)	(0.166)	(0.684)	(0.094)+
birth: 5th child	0.65	0.79	0.51	-0.09	0.28	1.92	0.12	0.09
	(0.102)	(0.071)+	(0.089)+	(0.854)	(0.803)	(0.000)***	(0.914)	(0.937)
birth: 5th child x strong rel.	0.31	0.18	0.44	1.03		-3.14	1.78	1.89
	(0.436)	(0.687)	(0.159)	(0.033)*		(0.000)***	(0.030)*	(0.023)*
5th child present	0.73	0.58	0.58	-0.00	0.05	-1.94	-0.25	-0.26
	(0.072)+	(0.202)	(0.063)+	(0.993)	(0.977)	(0.000)***	(0.847)	(0.834)
5th child present x strong rel.	-2.28	-2.13	-2.59	-0.45	0.14	3.83		
	(0.010)*	(0.019)*	(0.016)*	(0.385)	(0.913)	(0.000)***		
age	-0.01	-0.01	-0.01	-0.01	0.01	0.01	0.01	0.01
	(0.453)	(0.494)	(0.500)	(0.498)	(0.637)	(0.641)	(0.558)	(0.546)
age^2	0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
	(0.525)	(0.509)	(0.582)	(0.549)	(0.682)	(0.572)	(0.497)	(0.479)
never married	-0.09	-0.09	-0.10	-0.11	-0.22	-0.21	-0.22	-0.23
	(0.303)	(0.290)	(0.225)	(0.171)	(0.004)*	(0.005)*	(0.004)*	(0.002)*
divorced or separated	0.01	0.01	0.02	0.01	-0.08	-0.06	-0.07	-0.07
	(0.944)	(0.919)	(0.883)	(0.931)	(0.508)	(0.630)	(0.558)	(0.580)
year of divorce	-0.31	-0.30	-0.31	-0.31	-0.72	-0.71	-0.73	-0.72
	(0.163)	(0.172)	(0.160)	(0.166)	(0.003)*	(0.003)*	(0.003)*	(0.003)*
year of marriage	0.07	0.06	0.06	0.06	-0.06	-0.05	-0.05	-0.06
	(0.351)	(0.386)	(0.459)	(0.400)	(0.382)	(0.479)	(0.426)	(0.360)
widowed	-0.15	-0.11	-0.14	-0.11	-0.58	-0.54	-0.54	-0.59
	(0.694)	(0.771)	(0.691)	(0.747)	(0.112)	(0.160)	(0.156)	(0.103)

Table A–5: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
health satisfaction	0.15	0.15	0.15	0.15	0.13	0.13	0.13	0.13
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
household income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.012)*	(0.013)*	(0.014)*	(0.012)*	(0.029)*	(0.027)*	(0.031)*	(0.031)*
unemployed	-0.23	-0.23	-0.23	-0.23	-0.66	-0.65	-0.65	-0.66
	(0.128)	(0.123)	(0.128)	(0.122)	(0.000)***	(0.000)***	(0.000)***	(0.000)***
support from partner	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
support from neighbors	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(0.041)*	(0.034)*	(0.041)*	(0.042)*	(0.109)	(0.103)	(0.104)	(0.095)+
support from colleages	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00
	(0.646)	(0.679)	(0.643)	(0.652)	(0.514)	(0.510)	(0.526)	(0.535)
support from friends	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
	(0.002)*	(0.002)*	(0.002)*	(0.001)*	(0.098)+	(0.089)+	(0.087)+	(0.103)
waves 2–3	0.22	0.22	0.22	0.22	0.24	0.23	0.23	0.24
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
waves 4–6	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09
	(0.002)*	(0.002)*	(0.002)*	(0.002)*	(0.014)*	(0.020)*	(0.017)*	(0.017)*
waves 10–12	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.02
	(0.664)	(0.693)	(0.724)	(0.735)	(0.689)	(0.690)	(0.594)	(0.631)
Adjusted R^2	0.077	0.079	0.078	0.078	0.061	0.061	0.060	0.060
N(id)	3425	3425	3425	3425	3727	3727	3727	3727
Observations	13794	13794	13794	13794	14448	14448	14448	14448

[a] times per month; [b] on a scale from 0 – *not at all* to 10 – *a great deal*; $+p < 0.1;\ *p < 0.05;\ ***p < 0.000$; p-values in parentheses;
Source: SHP data, waves 2–12.
Note: Fixed-effect estimates with clustered standard errors. Sample consists of women aged 25–50 years and men aged 25–60 years, including parents with a second child under the age of 13 and a reference group (parents with one child and childless people).

Table A–6: Predictors of dynamics of life satisfaction, third child

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
Age of a third child:								
4 years before birth				*reference category*				
3 years before birth	-0.05	0.28	-0.09	-0.06	0.07	-0.08	-0.13	-0.09
	(0.808)	(0.251)	(0.779)	(0.793)	(0.745)	(0.651)	(0.570)	(0.609)
3 years before birth x strong rel.	0.07	-0.31	0.13	0.14	-0.20	0.04	0.10	0.05
	(0.766)	(0.249)	(0.683)	(0.584)	(0.473)	(0.871)	(0.719)	(0.852)
2 years before birth	0.29	0.18	0.02	0.08	0.21	0.13	0.16	-0.07
	(0.111)	(0.486)	(0.940)	(0.721)	(0.272)	(0.443)	(0.406)	(0.640)
2 years before birth x strong rel.	-0.34	-0.06	0.12	0.07	-0.18	-0.02	-0.06	0.54
	(0.154)	(0.835)	(0.675)	(0.780)	(0.441)	(0.943)	(0.801)	(0.007)*
1 year before birth	0.02	-0.23	-0.11	-0.01	0.34	0.07	0.17	0.00
	(0.904)	(0.430)	(0.658)	(0.941)	(0.046)*	(0.680)	(0.381)	(0.992)
1 year before birth x strong rel.	-0.06	0.26	0.12	0.01	-0.30	0.14	-0.01	0.45
	(0.816)	(0.408)	(0.659)	(0.953)	(0.187)	(0.541)	(0.952)	(0.045)*
birth	0.21	-0.01	0.44	0.38	0.41	0.41	0.39	0.25
	(0.305)	(0.976)	(0.152)	(0.109)	(0.057)+	(0.102)	(0.065)+	(0.156)
birth x strong relationships	-0.04	0.23	-0.35	-0.34	-0.18	-0.14	-0.17	0.18
	(0.877)	(0.511)	(0.305)	(0.239)	(0.508)	(0.621)	(0.529)	(0.473)
1 years old	0.14	0.02	0.31	0.18	0.06	0.03	0.11	0.12
	(0.523)	(0.948)	(0.270)	(0.420)	(0.721)	(0.860)	(0.576)	(0.448)
1 years old x strong relationships	-0.03	0.12	-0.27	-0.09	0.20	0.20	0.15	0.15
	(0.924)	(0.724)	(0.407)	(0.760)	(0.410)	(0.385)	(0.561)	(0.550)
2 years old	0.16	-0.09	0.31	0.13	0.01	-0.03	0.01	0.04
	(0.477)	(0.820)	(0.340)	(0.614)	(0.971)	(0.884)	(0.970)	(0.852)
2 years old x strong relationships	0.02	0.29	-0.21	0.09	0.32	0.31	0.38	0.43
	(0.953)	(0.503)	(0.572)	(0.774)	(0.278)	(0.254)	(0.203)	(0.112)
3 years old	-0.02	-0.54	0.05	-0.03	0.01	-0.17	0.07	0.00
	(0.942)	(0.149)	(0.873)	(0.901)	(0.952)	(0.478)	(0.780)	(0.989)
3 years old x strong relationships	-0.12	0.52	-0.19	-0.10	0.22	0.42	0.17	0.38
	(0.699)	(0.203)	(0.586)	(0.744)	(0.445)	(0.144)	(0.558)	(0.191)
4 years old	0.24	-0.20	0.35	0.27	0.01	-0.18	-0.04	-0.11
	(0.279)	(0.586)	(0.253)	(0.268)	(0.970)	(0.450)	(0.872)	(0.575)
4 years old x strong relationships	-0.25	0.32	-0.38	-0.33	0.11	0.39	0.26	0.55
	(0.384)	(0.412)	(0.270)	(0.268)	(0.716)	(0.195)	(0.395)	(0.068)+
5 years old	0.09	-0.37	0.40	0.22	0.00	-0.13	-0.00	-0.04
	(0.701)	(0.327)	(0.201)	(0.390)	(0.990)	(0.600)	(0.995)	(0.857)
5 years old x strong relationships	0.06	0.62	-0.39	-0.09	0.23	0.43	0.32	0.51
	(0.838)	(0.130)	(0.278)	(0.779)	(0.495)	(0.177)	(0.320)	(0.107)
6 years old	0.08	-0.14	0.35	0.16	0.21	0.12	0.10	-0.02
	(0.729)	(0.705)	(0.266)	(0.524)	(0.447)	(0.606)	(0.688)	(0.938)
6 years old x strong relationships	-0.07	0.23	-0.46	-0.18	-0.10	-0.01	0.14	0.50
	(0.838)	(0.570)	(0.207)	(0.581)	(0.757)	(0.975)	(0.667)	(0.120)
7 years old	0.28	-0.20	0.29	0.23	0.25	0.01	0.15	0.03
	(0.278)	(0.611)	(0.379)	(0.375)	(0.329)	(0.964)	(0.554)	(0.890)
7 years old x strong relationships	-0.32	0.35	-0.29	-0.26	-0.02	0.37	0.26	0.66
	(0.339)	(0.418)	(0.432)	(0.444)	(0.951)	(0.234)	(0.424)	(0.041)*
8 years old	0.08	-0.36	0.06	0.03	0.22	-0.09	-0.12	-0.20
	(0.772)	(0.363)	(0.858)	(0.925)	(0.388)	(0.696)	(0.655)	(0.354)
8 years old x strong relationships	-0.04	0.51	0.02	0.11	-0.08	0.45	0.68	1.11
	(0.907)	(0.240)	(0.950)	(0.740)	(0.823)	(0.176)	(0.044)*	(0.001)***
9 years old	0.03	-0.45	0.23	0.10	0.18	-0.12	-0.04	-0.13
	(0.904)	(0.247)	(0.493)	(0.722)	(0.507)	(0.631)	(0.862)	(0.541)
9 years old x strong relationships	0.10	0.70	-0.17	0.08	-0.13	0.40	0.41	0.73
	(0.773)	(0.102)	(0.668)	(0.826)	(0.712)	(0.217)	(0.222)	(0.025)*
10 years old	0.17	-0.38	0.24	0.04	0.23	-0.17	0.07	-0.12
	(0.550)	(0.355)	(0.482)	(0.877)	(0.399)	(0.492)	(0.788)	(0.568)
10 years old x strong relationships	-0.21	0.52	-0.30	0.03	-0.12	0.54	0.23	0.82
	(0.559)	(0.249)	(0.449)	(0.943)	(0.725)	(0.105)	(0.508)	(0.014)*
11 years old	0.09	-0.64	0.20	0.02	0.12	-0.28	-0.12	-0.18
	(0.764)	(0.122)	(0.555)	(0.949)	(0.659)	(0.248)	(0.651)	(0.407)
11 years old x strong relationships	-0.19	0.77	-0.35	-0.07	-0.21	0.49	0.30	0.59
	(0.601)	(0.093)+	(0.383)	(0.843)	(0.550)	(0.145)	(0.389)	(0.085)+
12 years old	-0.01	-0.52	0.28	0.12	0.07	-0.32	-0.07	-0.12
	(0.970)	(0.229)	(0.444)	(0.675)	(0.807)	(0.210)	(0.789)	(0.586)
12 years old x strong relationships	0.12	0.74	-0.30	-0.06	-0.06	0.61	0.27	0.52
	(0.751)	(0.119)	(0.480)	(0.868)	(0.860)	(0.076)+	(0.451)	(0.137)

Table A–6: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
birth: 1st child	0.17	-0.13	0.55	0.17	-0.16	-0.16	-0.09	0.04
	(0.396)	(0.617)	(0.105)	(0.504)	(0.355)	(0.362)	(0.758)	(0.856)
birth: 1st child x strong rel.	-0.07	0.30	-0.52	-0.11	0.15	0.12	0.03	-0.20
	(0.766)	(0.299)	(0.147)	(0.697)	(0.548)	(0.600)	(0.934)	(0.436)
1st child present	-0.12	0.03	-0.61	-0.26	0.15	0.15	0.17	0.04
	(0.607)	(0.928)	(0.090)+	(0.368)	(0.426)	(0.431)	(0.572)	(0.864)
1st child present x strong rel.	-0.02	-0.18	0.61	0.24	0.02	0.04	-0.06	0.17
	(0.935)	(0.581)	(0.118)	(0.465)	(0.941)	(0.872)	(0.848)	(0.551)
birth: 2nd child	-0.01	-0.38	-0.05	-0.10	0.20	0.12	0.14	-0.04
	(0.968)	(0.158)	(0.848)	(0.665)	(0.491)	(0.564)	(0.516)	(0.815)
birth: 2nd child x strong rel.	0.22	0.58	0.23	0.34	-0.37	-0.26	-0.29	-0.03
	(0.388)	(0.055)+	(0.416)	(0.200)	(0.255)	(0.324)	(0.268)	(0.904)
2nd child present	0.37	0.68	-0.00	0.21	-0.33	-0.15	-0.24	-0.08
	(0.178)	(0.045)*	(0.995)	(0.480)	(0.286)	(0.526)	(0.314)	(0.716)
2nd child present x strong rel.	-0.76	-0.91	-0.10	-0.43	0.28	0.02	0.18	-0.05
	(0.023)*	(0.018)*	(0.769)	(0.219)	(0.440)	(0.943)	(0.554)	(0.869)
birth: 4th child	-0.09	-1.89	-0.31	-0.20	-0.47	-0.26	-0.36	-0.18
	(0.854)	(0.011)*	(0.533)	(0.563)	(0.029)*	(0.261)	(0.133)	(0.333)
birth: 4th child x strong rel.	0.25	2.12	0.60	0.56	0.42	0.07	0.30	-0.61
	(0.636)	(0.006)*	(0.266)	(0.187)	(0.170)	(0.833)	(0.418)	(0.158)
4th child present	-0.59	1.29	-0.19	-0.04	0.14	0.27	0.05	-0.03
	(0.294)	(0.001)*	(0.685)	(0.897)	(0.488)	(0.228)	(0.788)	(0.863)
4th child present x strong rel.	0.45	-1.58	-0.03	-0.28	-0.19	-0.54	-0.12	0.57
	(0.449)	(0.000)***	(0.960)	(0.465)	(0.487)	(0.057)+	(0.719)	(0.201)
birth: 5th child	0.67	0.80	0.70	0.03	0.48	1.94	0.33	0.35
	(0.229)	(0.177)	(0.064)+	(0.961)	(0.657)	(0.000)***	(0.754)	(0.745)
birth: 5th child x strong rel.	-0.12	-0.22	-0.20	0.85		-2.73	2.14	2.14
	(0.850)	(0.735)	(0.701)	(0.178)		(0.000)***	(0.003)*	(0.003)*
5th child present	0.08	-0.10	-0.11	-0.37	-0.09	-2.14	-0.72	-0.75
	(0.742)	(0.735)	(0.578)	(0.135)	(0.952)	(0.000)***	(0.429)	(0.437)
5th child present x strong rel.	-0.96	-0.85	-0.90	-0.22	-0.43	3.27		
	(0.011)*	(0.038)*	(0.029)*	(0.444)	(0.746)	(0.000)***		
age	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.00
	(0.302)	(0.314)	(0.316)	(0.301)	(0.579)	(0.622)	(0.648)	(0.655)
age^2	0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
	(0.288)	(0.299)	(0.360)	(0.322)	(0.756)	(0.678)	(0.597)	(0.633)
never married	-0.08	-0.08	-0.09	-0.10	-0.19	-0.19	-0.19	-0.20
	(0.371)	(0.330)	(0.271)	(0.205)	(0.014)*	(0.016)*	(0.015)*	(0.010)*
divorced or separated	0.00	-0.00	0.00	-0.01	-0.05	-0.02	-0.03	-0.02
	(0.980)	(0.976)	(0.968)	(0.944)	(0.676)	(0.880)	(0.788)	(0.848)
year of divorce	-0.24	-0.25	-0.26	-0.26	-0.71	-0.69	-0.71	-0.70
	(0.219)	(0.205)	(0.188)	(0.185)	(0.003)*	(0.003)*	(0.002)*	(0.003)*
year of marriage	0.10	0.09	0.08	0.08	-0.03	-0.02	-0.03	-0.03
	(0.197)	(0.211)	(0.277)	(0.261)	(0.595)	(0.731)	(0.639)	(0.617)
widowed	-0.19	-0.22	-0.23	-0.21	-0.48	-0.48	-0.46	-0.49
	(0.470)	(0.391)	(0.343)	(0.367)	(0.092)+	(0.094)+	(0.103)	(0.078)+

Table A–6: (Continued)

	Women:				Men:			
	Size of network (1)	Contact frequency[a] (2)	Practical support[b] (3)	Emotional support[b] (4)	Size of network (5)	Contact frequency[a] (6)	Practical support[b] (7)	Emotional support[b] (8)
health satisfaction	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
household income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.011)*	(0.012)*	(0.014)*	(0.011)*	(0.037)*	(0.041)*	(0.041)*	(0.034)*
unemployed	-0.23	-0.23	-0.23	-0.24	-0.71	-0.70	-0.70	-0.71
	(0.119)	(0.116)	(0.115)	(0.109)	(0.000)***	(0.000)***	(0.000)***	(0.000)***
support from partner	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
support from neighbors	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(0.073)+	(0.060)+	(0.073)+	(0.071)+	(0.061)+	(0.053)+	(0.057)+	(0.051)+
support from colleages	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00
	(0.590)	(0.712)	(0.690)	(0.696)	(0.275)	(0.327)	(0.308)	(0.336)
support from friends	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
	(0.007)*	(0.012)*	(0.008)*	(0.008)*	(0.105)	(0.085)+	(0.085)+	(0.099)+
waves 2–3	0.20	0.19	0.20	0.20	0.16	0.16	0.16	0.16
	(0.001)*	(0.001)*	(0.001)*	(0.001)*	(0.003)*	(0.004)*	(0.004)*	(0.002)*
waves 4–6	0.10	0.10	0.10	0.10	0.06	0.05	0.05	0.06
	(0.007)*	(0.007)*	(0.007)*	(0.006)*	(0.089)+	(0.102)	(0.104)	(0.083)+
waves 10–12	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
	(0.288)	(0.310)	(0.293)	(0.294)	(0.237)	(0.239)	(0.163)	(0.173)
Adjusted R^2	0.075	0.076	0.075	0.075	0.061	0.061	0.061	0.062
N(id)	3827	3827	3827	3827	4123	4123	4123	4123
Observations	16302	16302	16302	16302	17135	17135	17135	17135

[a] times per month; [b] on a scale from 0 – *not at all* to 10 – *a great deal*; $+p < 0.1$; $*p < 0.05$; $***p < 0.000$; p-values in parentheses;
Source: SHP data, waves 2–12.
Note: Fixed-effect estimates with clustered standard errors. Sample consists of women aged 25–50 years and men aged 25–60 years, including parents with a third child under the age of 13 and a reference group (parents with one or two children and childless people).

Additional analysis – determinants of belonging to the 'strong relationships' group among women

To understand if belonging to the 'strong relationships' group may be, for women, a sign of need for support, we run a set of cross-sectional logistic models, regressing belonging to the 'strong relationships' group on individual predictors. This analysis is performed on the level of persons (and not person-years, as analyses presented in other sections), therefore we use only time-invariant predictors. The results estimated on the general sample of women and on the sample limited to mothers are presented in Table A–7.

Overall, the odds of belonging to the 'strong relationships' group are higher for women who are privileged in terms of education and income. Higher household income systematically correlates with higher probability of belonging to the 'strong relationships' group. Women with higher education have a higher probability of having access to high practical support than women with primary or vocational education.

Also mothers and prospective mothers, as well as younger women (i.e., born in more recent cohorts), have higher odds of belonging to the 'strong relationships' groups. These results are not affected by including the nationality and language groups in the model.

Table A–7: Logistic regression of belonging to the 'strong relatonships' groups on time-invariant characteristics of individuals, women only. Logistic regression; the table shows odds ratios

	Large network ≥ 5.5		Frequent contact[a] ≥ 4		Practical support[b] ≥ 7		Emotional support[b] ≥ 7.9	
	women overall	mothers	women overall	mothers	women overall	mothers	overall overall	women
secondary educ. (ref: primary)	1.06	1.03	1.03	1.17	1.29	1.37	1.07	1.11
	(0.424)	(0.803)	(0.735)	(0.153)	(0.001)***	(0.002)*	(0.346)	(0.283)
tertiary educ. (ref: primary)	0.94	1.01	1.05	1.00	1.29	1.23	1.05	0.96
	(0.445)	(0.938)	(0.547)	(0.992)	(0.002)*	(0.082)+	(0.546)	(0.745)
household income	1.14	1.13	1.30	1.16	1.20	1.09	1.17	1.04
	(0.001)***	(0.035)*	(0.000)***	(0.026)*	(0.000)***	(0.114)	(0.000)***	(0.404)
born 1950–59 (ref: born 1970+)	1.19	1.33	0.61	0.49	0.41	0.36	0.59	0.60
	(0.027)*	(0.006)*	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
born 1960–69 (ref: born 1970+)	1.09	1.10	0.84	0.74	0.68	0.59	0.80	0.78
	(0.232)	(0.297)	(0.017)*	(0.005)*	(0.000)***	(0.000)***	(0.002)*	(0.008)*
other passport and language (ref: Swiss)	1.38	1.15	1.23	0.83	0.67	0.53	1.16	0.94
	(0.015)*	(0.393)	(0.140)	(0.306)	(0.002)*	(0.000)***	(0.244)	(0.733)
Swiss passport, other language (ref: Swiss)	1.07	1.04	1.39	1.27	1.08	1.03	1.23	1.11
	(0.509)	(0.737)	(0.002)*	(0.095)+	(0.426)	(0.843)	(0.033)*	(0.417)
other passport, Swiss language (ref: Swiss)	0.50	0.59	0.33	0.40	0.30	0.39	0.39	0.52
	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
ever a mother (ref: childless)	2.13		2.12		1.50		1.30	
	(0.000)***		(0.000)***		(0.000)***		(0.000)***	
age at 1st birth		0.98		1.00		1.01		1.00
		(0.057)+		(0.856)		(0.322)		(0.999)
Observations	4885	2862	4885	2862	4885	2862	4885	2862
Pseudo R^2	0.033	0.008	0.046	0.025	0.045	0.038	0.022	0.011

[a] times per month
[b] on a scale from 0 – *not at all* to 10 – *a great deal*
$+p < 0.1$; $*p < 0.05$; $***p < 0.000$; *p*-values in parentheses;

Source: SHP data, waves 2–12.
Note: Cross-sectional estimation on a sample consisting of women born between years 1950 and 1986 (i.e., aged 25–50 during the survey) who are childless or whose first, second, or third child is 12 years old or younger. All predictors are defined as time-invariant. The analysis on the subgroup of mothers also includes prospective mothers.