

Barschkett, Mara; Spieß, C. Katharina; Ziege, Elena

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Intergenerational Effects of Grandparental Care on Children and Parents*

Mara Barschkett^{1,2}, C. Katharina Spiess^{1,2}, and Elena Ziege^{1,3}

¹DIW Berlin

²Freie Universität Berlin

³Humboldt Universität zu Berlin

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Abstract

Grandparents act as the third biggest care giver besides day care and parental care for children below the age of 6 in most OECD countries. Despite its relevance, the effects of child care provided by grandparents on child and parental outcomes have received little attention in the literature. We investigate the potential impact of grandparental care on children's non-cognitive outcomes and parental well-being. To capture heterogeneous effects on different dimensions of children's socio-emotional behavior and parental satisfaction, we consider a broad range of outcomes. Based on a representative German panel data set, we analyze age-specific effects for families with children below the age of 11. Our preliminary results suggest null or negative effects on children's health and socio-emotional behavior, but only for children of certain age groups. Additionally, there is suggestive evidence for positive effects on parental satisfaction with the child care situation, parental social contacts and leisure while there are negative effects on paternal satisfaction with the own education and career and the parental satisfaction with the work-life balance, again varying by child age.

Keywords: grandparental child care, child non-cognitive outcomes, parental well-being, instrumental variable approach

JEL classification: D1, I21, I31, J13, J14

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1 Introduction

In many OECD countries grandparents¹ act as the third biggest care giver following parental and daycare². In Germany in 2019, at least every third child below the age of 6 is cared for by the grandparents on a regular basis (see Figure 2, chapter 3).³ Although formal child care arrangements, such as care in daycare centers or licensed family day care, have expanded over the past decades (e.g. Autorengruppe Bildungsberichterstattung, 2020), the relevance of grandparents as informal care givers has remained relatively stable over the last five years following a slight increase from 2009 to 2013 (see Figure 1, chapter 3). The continuously high importance of grandparental care may be attributable to the need to reconcile child care, (full-time) employment, and longer commutes. Despite their relevance in the “care-puzzle” of many families, the effects of grandparental care have received little attention in the literature relative to parental care and daycare.

Along with the roll-out of publicly funded childcare systems and thus increasing enrollment rates in early childhood education and care of children below school age in many OECD countries (e.g. OECD, 2019), economic research on daycare enrollment has grown rapidly over the last few decades. There is evidence that non-maternal care arrangements such as daycare have the potential to produce equally good outcomes or even outperform parental care for both children and parents. This applies especially for children from disadvantaged backgrounds (e.g. Barnett, 2011; Cornelissen et al., 2018; Felfe and Lalive, 2018; Gupta and Simonsen, 2010; Havnes and Mogstad, 2011, 2015; Heckman, 2006; Schmitz, 2019). At the center of attention of this field of literature are the effects of parental care and daycare. Yet, we also expect grandparents as care actors to influence child and parental outcomes. However, the intensity of grandparental care might not be high enough to substantially affect these outcomes or this care might be too similar to the counterfactual care option. Therefore, it remains an empirical question whether this applies. In this paper we focus on children’s non-cognitive skills and parental well-being which important outcomes for several reasons.

¹We use three generations in this paper. We always use the word *grandparents* for the oldest generation and call their own children *parents*. The youngest generation, the children of the *parents*, are called *children*.

²The term daycare describes all forms of formal child care provided by professionals outside the family. Daycare centers are publicly funded by the state (e.g. Spiess, 2008). The term parental child care describes all child care provided by the mother or the father of the child. Grandparental care describes the condition when grandparents take care of their grandchildren, the *children* in our setting.

³This number is based on our own calculations with pairfam. Numbers are slightly different in other data sets, e.g. Socio-Economic Panel Study (SOEP) or DJI-Kinderbetreuungsstudie (KiBS), due to differently phrased questions.

First, the development of non-cognitive skills early in life has proven to be an important predictor of later educational achievements, health outcomes and labor market success during adulthood (e.g. Blanden et al., 2007; Carneiro et al., 2007; Cobb-Clark and Schurer, 2013; Currie and Stabile, 2006; Heckman et al., 2013; Prevoo and ter Weel, 2015). The formation of non-cognitive skills is at least equally important as the development of cognitive skills. Cunha and Heckman (2007) for example find that non-cognitive skills promote the formation of cognitive skills but not vice versa. Similarly, Heckman (2006) shows that non-cognitive skills are as important for school enrollment decisions as cognitive skills. Thus, studying influencing factors of children’s non-cognitive abilities and behavioral development early in life are of crucial (policy) importance.

Secondly, parental well-being can be used to measure the utility parents derive from the different arrangements and can act as a well-being measure *per se*. Additionally, the well-being of parents improves child development (e.g. Berger and Spiess, 2011; Dahlen, 2016). For instance, there is a positive association between maternal life satisfaction and pro-social behavior of children (see e.g. Richter et al., 2018). Moreover, parental well-being influences other important parental outcomes, such as maternal labor supply and fertility (e.g. Sandner, 2019). Furthermore, understanding how different care providers affect parent’s subjective well-being can contribute to the well-being research that focuses on wealth measures beyond GDP (Stiglitz et al., 2020).

In this paper we estimate the causal impact of grandparental care on child and parental outcomes. Hereby, we make two contributions to the literature. First, to the best of our knowledge, Del Boca et al. (2018) is the only study estimating the causal impact of grandparental care on child outcomes, but focuses exclusively on cognitive outcomes. In contrast, we particularly focus on non-cognitive outcomes. We expect the effects of grandparents to be larger on non-cognitive skill formation as grandparents might consider themselves less as a pre-school teacher but rather as a person of reference for their grandchildren. Thus, on the one hand, they might deliver a less structured and focused pre-school education compared to daycare. On the other hand, they might offer a closer relationship than daycare teachers influencing children’s health and in particular socio-emotional behavior. Rather than using simply an overall index of socio-emotional behavior as most previous economic studies evaluating daycare effects do, we differentiate also between individual dimensions, such as social versus emotional development. This allows a better understanding of the

mechanisms how grandparental care affect some non-cognitive skill dimensions more than others and to disentangle which dimensions drive the overall associations.

Secondly, apart from Chen and Zhang (2018), who evaluate the impact of grandparental retirement on parental well-being, we – again to the best of our knowledge – are the first to address the causal link between grandparental care and parental well-being. Here, we consider a range of well-being outcomes in order to capture potential heterogeneous effects. On the one hand, for instance, grandparental care could provide parents with more time for themselves leading to improved satisfaction with their leisure time use or social contacts. On the other hand, grandparental care might be a less stable and continuous care option, for instance, due to sickness or other obligations of the grandparents, compared to daycare which in turn could lead to more stress reconciling work and child care resulting in decreased satisfaction with the career or the work-life-balance. Our paper expands the literature by estimating the causal effect of grandparental care on non-cognitive child outcomes and parental well-being.

The identification of a causal relationship between grandparental care and child and parental outcomes faces an endogeneity threat as the care decision made by parents and grandparents is endogenous. In order to overcome this endogeneity problem, we employ an instrumental variable approach. Similar to Del Boca et al. (2018), we use the distance to the grandparents as an instrument for grandparental care. Our analysis is based on a representative panel data set for Germany. We use the Panel Analysis of Intimate Relationships and Family Dynamics (pairfam) that includes detailed information about children, parents and grandparents as well as about child care arrangements and several child and parental outcomes. We use a sample of families with children below the age of 11 and observe them over a ten year period (2009-2019). This age range refers to children which are usually seen as those who require some kind of care.

Our preliminary results provide evidence that grandparental care negatively affects children’s general health of pre-school and elementary school children and emotional problems of children from 3 to 5.5 years. Additionally, we provide evidence that grandparental care increases maternal and paternal satisfaction with the child care situation and social contacts and exhibits positive effects on maternal satisfaction with leisure. In contrast, we find negative effects of grandparental care on the satisfaction with work-life balance for parents with younger children and a decrease in paternal satisfaction with his own education and

career. The effect sizes range between 9% (paternal satisfaction with career and education) and 30% (maternal satisfaction with work-life balance). Thus, grandparental care has positive effects on some aspects and negative effects on other aspects of parental satisfaction, varying by child age. Further robustness checks and subsample analyses will be conducted as we proceed with this paper.

The remainder of this paper is structured as follows: Section 2 reviews the related literature. In section 3 we depict the institutional setting in Germany. Section 4 describes the used data set and discusses possible mechanisms of the effects of grandparental care on children and parents. In section 5 we present the empirical strategy. Section 6 reports the main findings and discusses the robustness of the results and section 7 concludes.

2 Literature Overview

The existing literature on the effects of different care arrangements including grandparental care can be divided into three strands: Studies exploring (i) the determinants of grandparental care and the effects on grandparental outcomes such as well-being and labor supply; ii) the effects of daycare and grandparental care on child outcomes; and iii) the effects of daycare and grandparental care on parental well-being. We discuss the relation of our paper to these three strands in the following:

Determinants of grandparental care and effects on grandparents:

Whether grandparents provide care for their grandchildren is determined by various characteristics of grandparents, parents, and children. On the grandparental level, Hank and Buber (2009) find that employed grandparents are less likely to provide care on a regular basis and that the probability of providing care decreases with increasing age and health limitations. They also find that lone grandfathers are less likely to provide care than grandfathers with a partner. Additionally, Danielsbacka et al. (n.d.) show that maternal grandmothers provide most child care, followed by maternal grandfathers and paternal grandmothers while paternal grandfathers provide the least care. Moreover, Seilbeck and Langmeyer (2018) point out that the contact between grandparents and grandchildren decreases with increasing distance.

On the parental level, Jappens and Van Bavel (2012) find that grandparents are less likely to be the main care provider with increasing maternal age and employment. While they

find that mothers' own attitudes toward family and gender do not determine grandparental care use, Jappens and Van Bavel (2012) show that the attitudes in her region do. More specifically, mothers living in more conservative regions are more likely to use grandparents as the main care provider. In contrast, Bjerre et al. (2011) find for Germany, that more open and less neurotic mothers use grandparental care more often. Bordone et al. (2017) also analyze the association between a country's policy context and the frequency of grandparental care and find that in countries with scarce publicly funded daycare services and parental leave grandparental care is often provided on a daily basis. In comparison, in countries with generous public services and parental leave, grandparental care is rarely used.

Causal estimates on the effects of grandparental care on grandparental health, well-being and cognitive functioning are rare and find only limited evidence for an association. Danielsbacka et al. (2019) employ fixed-effects regressions and show that positive associations between grandparental care and health and well-being are only due to between-person differences and do not hold in within-person analyses. Arpino and Bordone (2014), however, instrument grandparental care with the availability of grandchildren and find positive effects on verbal fluency of the grandparents but no effects on other cognitive tests. Both studies use SHARE data for different European countries.

A number of studies have shown negative effects of grandparenthood on labor supply (e.g. Backhaus and Barslund, 2019; Frimmel et al., 2020; Rupert and Zanella, 2018). The effects can be attributed to grandmothers who are less attached to the labor market – at least for the cohorts studied so far. While Frimmel et al. (2020) and Backhaus and Barslund (2019) find evidence for extensive margin responses of grandmothers (leaving the labor market) using empirical econometric approaches, Rupert and Zanella (2018) estimate a structural labor supply model and find an intensive margin response for employed grandmothers (reduction in hours worked).

Effects of grandparental care on child outcomes:

Over the past years, the impact of other child care arrangements than grandparental care on both cognitive and non-cognitive skills has been studied extensively (e.g. Barnett, 2011; Cornelissen et al., 2018; Felfe and Lalive, 2018; Gupta and Simonsen, 2010; Heckman, 2006). For Germany, Felfe and Lalive (2018) evaluate the impact of daycare attendance between 0 and 2 years of age in West Germany and find positive effects on language and

social skills, especially for children with less-educated mothers. Similarly, Cornelissen et al. (2018) explore a policy reform of the German child care system from 1996 that guarantees a daycare slot for children above 3. They find that daycare attendance has a more positive effect for children from more disadvantaged backgrounds. Bach et al. (2019) exploit the same reform and show that one more year in daycare leads to positive effects on long-run personality traits. As daycare was shown to affect children’s non-cognitive outcomes, we expect other care arrangements like grandparental care to also affect their non-cognitive outcomes.

As mentioned above, to the best of our knowledge, there is only one study that estimates the causal impact of grandparental care on child outcomes. Del Boca et al. (2018) use the UK Millenium Cohort Study to evaluate the effect of grandparental care, instrumented with the distance between parental and grandparental house, on cognitive child outcomes at ages 3 to 7. Their results suggest that there is no difference in outcomes between children in grandparental care compared to parental care. However, they find children in (grand-)parental care to be better in naming objects, but worse at problem-solving, constructing objects, solving math exercises and developing basic concepts than children in formal care. The effects are stronger with the socio-economic gradient. In line with the results of Del Boca et al. (2018), Hansen and Hawkes (2009) find grandparental care to be positively associated with naming vocabulary but negatively correlated with behavioral problems. However, the results of Hansen and Hawkes (2009) cannot necessarily be interpreted as causal.

We add to this literature by estimating the causal effect of grandparental care on non-cognitive child outcomes and compare outcomes between children that are also in formal child care and children that are not.

Effects of different child care arrangements on parental well-being:

Most previous studies that estimate causal effects of grandparental care on parental outcomes have focused on the effects on maternal employment and fertility (e.g. Compton and Pollak, 2014; Eibich and Siedler, 2020; Fenoll, 2020; Rutigliano et al., 2020). So far we could only identify one study that evaluates the causal effect of grandparental retirement, which in principle could increase the availability for childcare, on maternal well-being. Despite positive effects of grandparental retirement on maternal employment and the timing of child birth, Chen and Zhang (2018) find no effect on mother’s subjective health or life satisfaction in China. However, they find grandmother’s retirement to decrease mother’s

body weight.

A larger, albeit still small, number of researchers has investigated the effects of daycare on parental well-being. Evidence on the effects of daycare provision in Germany on parental well-being is mixed, but generally positive. Kröll and Borck (2013) detect negative effects of daycare usage on maternal physical health but no effects on maternal mental well-being. In addition, they point out an increase in mother-child interactions. In contrast, the results of Schmitz (2019) suggest a positive effect on maternal life satisfaction. The effects are more pronounced for lone mothers and fulltime employed mothers (Schober and Schmitt, 2017) and generally stronger in East compared to West Germany (Schober and Stahl, 2016). Given the effects of daycare on maternal well-being shown in the literature, we expect grandparental care to also have an impact on maternal well-being and possibly on paternal well-being.

We extend this strand of the literature by estimating the effect of grandparental care on parental well-being, separately for mothers and fathers.

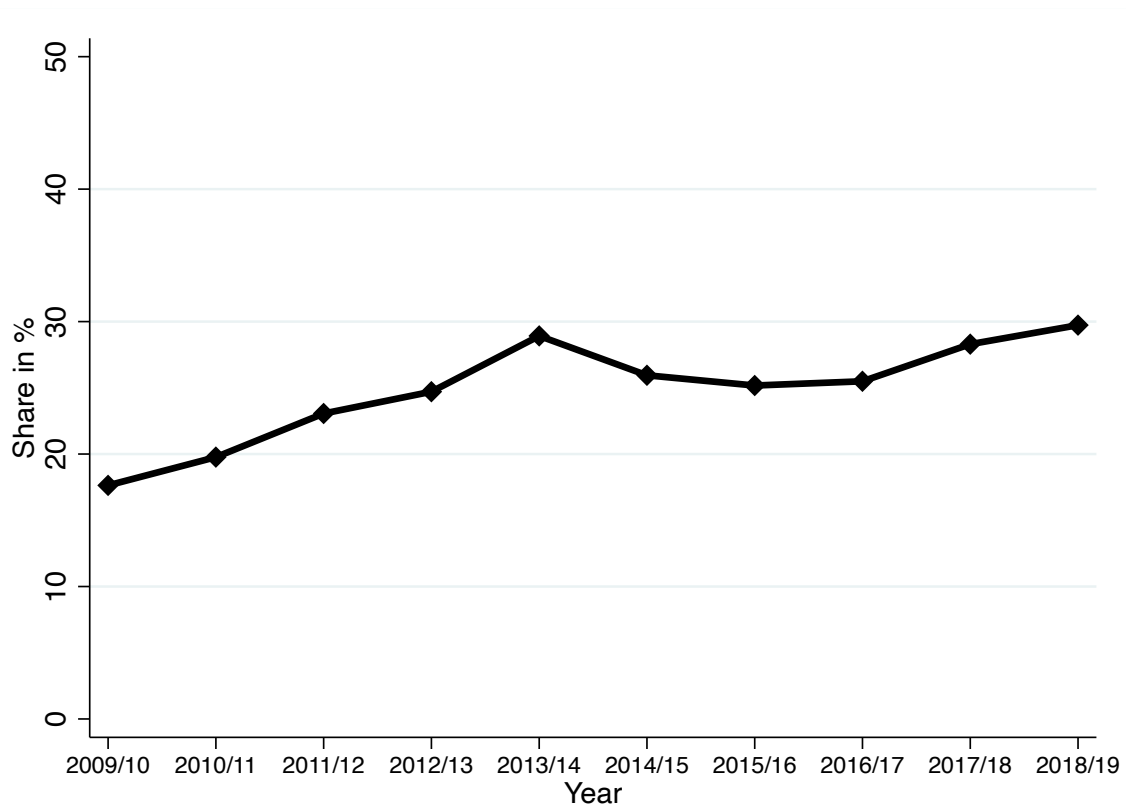
3 Institutional setting

The length of the life period shared between grandparents and their grandchildren has increased steadily until 1996 (Lauterbach, 2002). One important reason for this is the increasing life expectancy. Mahne (2016) shows that the share of grandparents that take care of their grandchildren decreased between 1996 and 2008 but increased until 2014 again. For children below the age of 6 there is an upward trend visible over the past decade in Germany (Figure 1). In 2009/10 less than 20% of children were in grandparental care while in 2018/19 almost 30% were cared for by their grandparents.

Following parental care and daycare, grandparents act as the third biggest care giver for children younger than six years of age (Autorengruppe Bildungsberichterstattung, 2018). Figure 2 shows that in 2018/19 across age groups grandparents care for about 20 to 30% of children below the age of six. Furthermore, daycare usage increases with age and ranges between 90 and 95% for children above three years.

Over the past decades, maternal employment in Germany has been increasing (e.g. OECD, 2020). This was possible through the increased supply of publicly funded daycare since the 1990s. An important contributor was the introduction of a legal claim for a four-hour

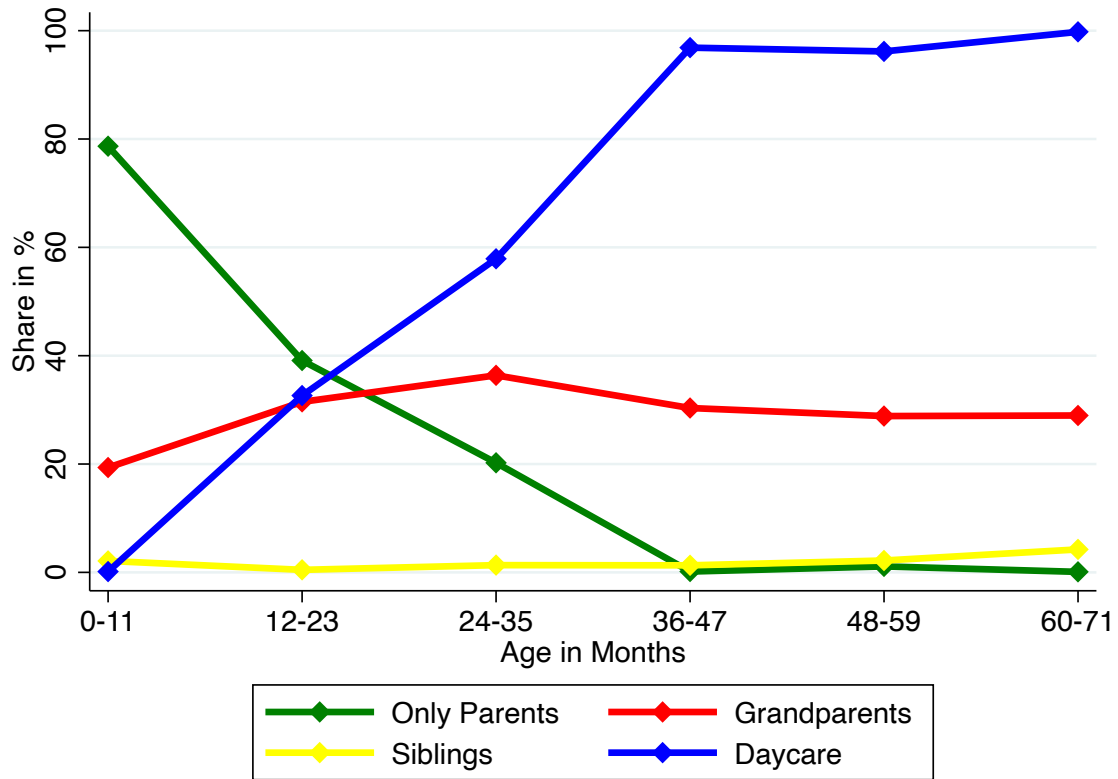
Figure 1: Development of grandparental care (2009-2019)



Note: The graph shows the development of grandparental care for children below the age of 6. A child is counted as cared for by the grandparents if the child is cared for by its grandparents in the morning or afternoon or both. *Source:* Pairfam (2009-2019), weighted, own calculation.

slot in 1996 for children aged three or older (Bauernschuster and Schlotter, 2015; Spiess, 2008) and the extensive expansion of day care for children below the age of three from 2007 onwards (e.g. Müller and Wrohlich, 2020). Still, publicly funded daycare coverage varies by children's age. Since 2000, enrolment has been almost universal for children above the age of three. Below age three, the proportion of children in daycare has seen a substantial expansion, especially in West Germany, from below 5 percent in 1990 to about 29.4 percent in 2018 (Seils, 2013; Statistisches Bundesamt, 2019). This expansion was fueled by the introduction of a legal entitlement for a daycare slot for children aged 1 year and older in 2013. Daycare fees are income dependent and typically amount to about 5 to 9 percent of net family income (Schmitz et al., 2017). Economically deprived households, i.e. mainly households receiving public transfers, are typically exempted from fees or their fees are covered by welfare agencies. However, despite the legal right and relatively low fees, only about one third of children below the age of three are in daycare. Most daycare centers are

Figure 2: Actors and institutions involved in care of children younger than 6 in Germany



Note: The graph shows the share of children cared for by different care actors across age groups. A child is counted as cared for by the grandparents in this graph if the child is cared for by its grandparents in the morning or afternoon or both. The same applies for the other actors. *Source:* Pairfam (2018/19), weighted, own calculation.

operated by non-profit organizations or municipalities. In comparison to the US market and some European markets, there is not much competition among daycare providers in Germany (e.g. Spiess, 2008) and the share of for-profit providers is low at about 2 percent (Statistisches Bundesamt, 2018).

Another form of childcare that has seen a large increase in usage in recent years in Germany are all-day schools. The share of all-day schools among all schools has increased from 28% in 2005/06 to 68% in 2018/19 (Autorengruppe Bildungsberichterstattung, 2020). This increase affects all types of schools, and also among elementary schools the share has risen from 29 to 68%. Since all-day schools allow children to be looked after in the afternoon, the childcare situation in Germany has changed considerably not only for preschool children but also for elementary school children. However, grandparents remain important in the “care-puzzle” of many families as they can facilitate the reconciliation of work, commutes,

child care and leisure activities for many parents.

Figure 3 shows the shares of different combinations of care actors for different child age groups. Panel (a) represents overall care use taking morning and/or afternoon together, panel (b) shows care use in the morning and panel (c) care use in the afternoon. The majority of young children (0-2 years) are cared for only by their parents (about 60%). In the morning, the second most frequently used option is a combination of parental and daycare which applies to about 25% of children, followed by a mixture of parental and grandparental care (about 15%). In the afternoon, the combination of parental and grandparental care is the second most frequently used option (20%) while only about 10% of children are cared for by parents and daycare. Older children (3-5.5 years, the so called "Kindergarten-age"⁴ and 5.5-10 years, elementary school children) are most frequently cared for by a combination of parents and daycare/school (80%) Here we observe and expect large differences between morning and afternoon: in the morning 90-95% of children are cared for by either daycare or school and parents while in the afternoon only about 30% of children are cared for by daycare/school and parents. Here the majority of children is cared for only by their parents (about 50%). A substantial amount of older children is also cared for by their grandparents in the afternoon: Almost 20% are cared for by parents and grandparents and about 10% by parents, daycare/school and grandparents. When comparing the care patterns for employed mothers and not-employed mothers, it becomes apparent that grandparents play a particular important role in families with employed mothers (see Figure A.1 in the Appendix). For families with very young children this is most visible as in the afternoon grandparents are involved in childcare for almost 40% of young children while this amounts only to less than 20% for children of not-employed mothers.

4 Data

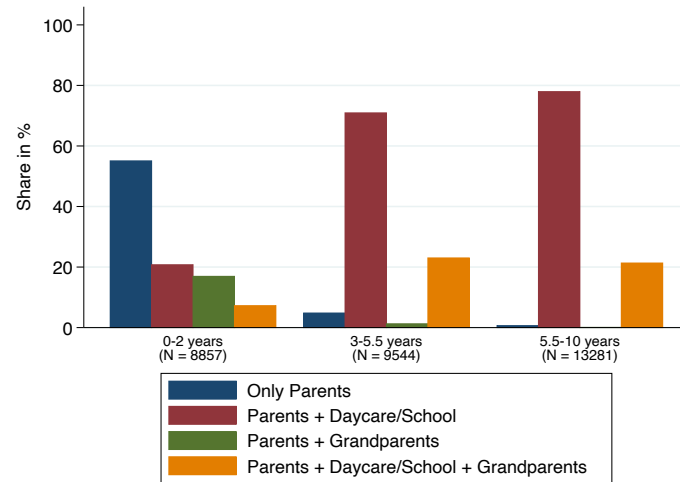
4.1 Pairfam

For the analysis, we use the representative survey dataset "Panel Analysis of Intimate Relationships and Family Dynamics" (pairfam). Participants are surveyed annually. The first wave of the sample consisted of 12,400 individuals equally distributed among the birth cohorts 1991–1993, 1981–1983, and 1971–1973. These individuals are called "anchor

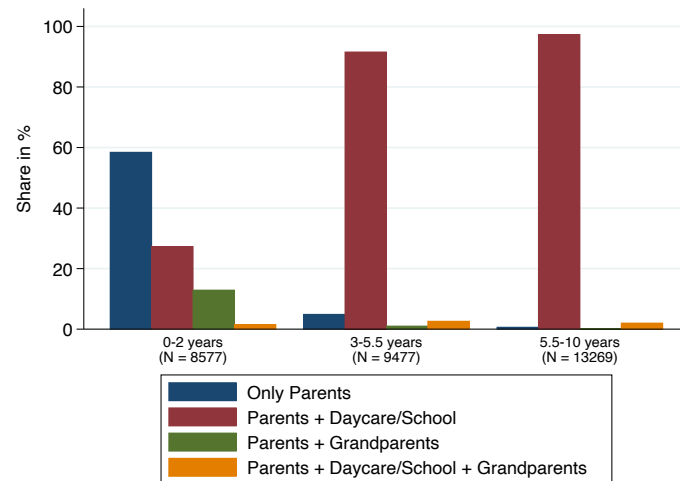
⁴The German „Kindergarten“ is very different to the US-Kindergarden, and covers day care children for children from 3 to 5.5 years old.

Figure 3: Care patterns

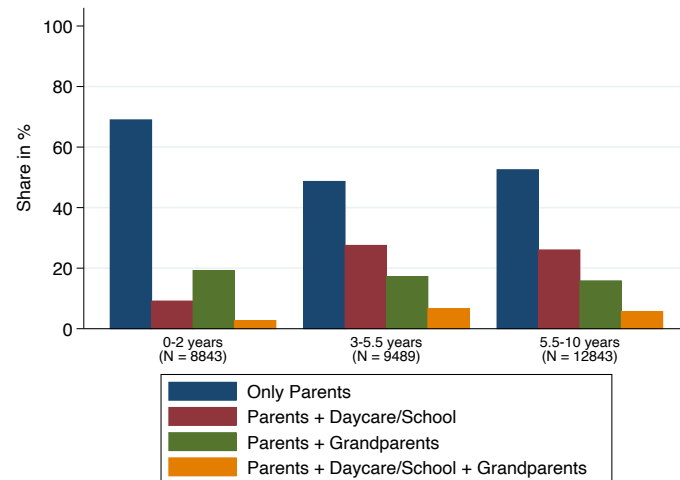
(a) Overall care use by age group



(b) Care use in the morning by age group



(c) Care use in the afternoon by age group



Note: The figures show the care use by age group. Overall care use takes all actors either caring for the child in the morning or afternoon or both into consideration. *Source:* Pairfam (2009-2019), weighted, own calculation.

persons”. Approximately one half of the anchors is male, and the other half is female. In addition, if anchors and anchors’ partners agreed, partners were surveyed from the first wave onwards. The response rate for partners lies at about 52% (Huinink et al., 2011).⁵

Pairfam is a multi-actor survey. In addition to anchors and partners, children (aged 8 to 15 years) and parents of anchors are surveyed separately. Furthermore, anchors and partners are questioned about their children (biological, adopted, foster and stepchildren of anchors living in one household) and parents in their own questionnaires in detail (Huinink et al., 2011). This detailed information on three generations make pairfam particularly suitable for our analysis. Since the child survey only includes children above the age of 7 and the parent survey suffers from a low response rate, we focus on the information obtained from the anchor and partner questionnaires in our analysis.

4.2 Grandparental Care Variable

Anchors are questioned about the child care situation for each child individually. In the questionnaire, 14 different potential child care actors are listed and the respondent is asked to select all applicable options for morning and afternoon child care separately. One of these actors are the grandparents of the child, however it is not differentiated between grandmothers and grandfathers. Thus, we have information on grandparental care for each child separately for both morning and afternoon.

The main explanatory variable in our analysis is the grandparental care variable. For the analysis of the effects on child outcomes and parental satisfaction with the child care situation, we use a binary variable that indicates whether a child is cared for by its grandparents in the morning or afternoon or both. To analyze all other parental outcomes, we use a binary variable, which equals one if at least one child of the parent in question is cared for by the grandparents in the morning or afternoon or both.⁶

4.3 Child Outcome Variables

We analyze the effects of grandparental care on children’s health and non-cognitive skills. Cognitive as well as non-cognitive outcomes are largely determined early in life and thus

⁵Analyses show that anchors whose partners participate and anchors whose partners do not participated do not differ systematically in most of their socio-economic characteristics. Thus, the partner sample can be considered as good as random.

⁶This approximation is valid since in 97% of households in our sample either no or all children are cared for by the grandparents.

input provided by carers plays a significant role in child development. To assess the effect on children’s health we consider children’s *general health problems* as well as the *prevalence of chronic diseases*. The *general health* variable is an ordinal variable ranging from 1 (very good health) to 5 (bad health) that was surveyed from 2010 onwards. The *prevalence of chronic diseases* is coded as a dummy variable (0 corresponds to no and 1 to yes). However, we do not expect an effect on chronic diseases.

To understand the effects of grandparental care on non-cognitive skills, we consider an index variable measuring children’s *socio-emotional problems*. This variable in the pairfam data is very similar to the internationally widely used SDQ Scale (Strength and Difficulties Questionnaire). In more detail, we analyze the impact of grandparental care on three indices (conduct problems, hyperactivity and emotional problems). Summing up the values from these three variables forms the variable *socio-emotional problems*. Conduct problems, hyperactivity and emotional problems are each constructed by summing two variables that range between 0 (does not apply) and 2 (fully applies).⁷ Therefore, conduct problems, hyperactivity and emotional problems range between 0 and 4 and *socio-emotional problems* between 0 and 12. These questions are only asked for children between 3 and 5 years from 2012 onwards.

Sample averages are shown in Table 1. Parents rate their children’s health on average very well: the mean is 1.57 which is close to 1 (very good health). Additionally, only 13% of children suffer from a chronic disease. Overall, parents assess the non-cognitive skills of their children quite high. This is reflected by the relatively low sample mean of the socio-emotional problems variable. Socio-emotional problems are quite evenly distributed across the three components that construct the socio-emotional problems variable (conduct problems, hyperactivity and emotional problems).

4.4 Parental Outcome Variables

In addition to the child outcomes, we analyze how grandparental care affects parental well-being. There are different forms of parental well-being: material, employment, educational, policy, health and behavior well-being as well as peer and family relations (e.g. Bertram and Spieß, 2011). We use several variables on subjective parental satisfaction as measures of parental well-being. The effect of grandparental care on parental well-being is analyzed

⁷Note, the questions are phrased negatively, meaning that high values correspond to negative characteristics.

Table 1: Sample means of outcome variables

	Health	Chr. dis.	Socio-emot. problems	Conduct	Hyperactivity	Emotional	
Children	1.57 (0.70)	0.13 (0.33)	3.18 (2.22)	1.13 (1.01)	1.08 (1.01)	0.97 (0.91)	
Observations	29,404	29,624	5,847	5,862	5,863	5,857	
Satisfaction:	General	Educ./career	Leisure	Contacts	Relationship	Work-life balance	Child care
Mother	7.69 (1.71)	7.10 (2.25)	6.33 (2.22)	7.26 (2.07)	7.65 (2.16)	6.31 (2.27)	8.37 (2.01)
Observations	18,568	18,346	18,599	18,605	17,401	6,523	20,192
Father	7.63 (1.61)	7.33 (2.0)	6.47 (2.07)	6.79 (2.04)	7.84 (2.05)	5.84 (2.22)	8.35 (1.85)
Observations	14,988	14,979	14,999	14,996	14,420	6,764	14,095

Note: Standard deviations in parentheses. *Source:* Pairfam (2009-2019), weighted, own calculation.

to understand the utility that parents gain from using grandparental care for their children. Apart from the direct effects of grandparental care on parental well-being as such, there might be indirect effects on child outcomes as mentioned in chapter 1.

We consider seven variables which are all ordinal variables on a 11-point Likert scale ranging from 0 (very dissatisfied) to 10 (very satisfied). The first variable captures the *general satisfaction with life* which is surveyed asking the following question: “Now I would like to ask about your general satisfaction with life. All in all, how satisfied are you with your life at the moment?”. In addition, pairfam contains several variables on domain-specific satisfaction. First, we consider the *satisfaction with school, education or career*. Secondly, anchors and partners are asked about their *satisfaction with leisure activities, hobbies and interests*. Thirdly, they are asked about their *satisfaction with friends and social contacts*. Additionally, respondents are asked to rate their *satisfaction with the relationship with their partner*. From 2013 onwards, anchors and partners are also asked about their *satisfaction with their work-life balance* with the following question: “How satisfied are you with the proportion of time that you spend on the job or for your vocational training or university education relative to the time that you spend on your personal life?”. Furthermore, anchors are asked about their *satisfaction with the childcare situation* for each of their children. Since this question is asked for each child separately, we can analyze the effect on child level.

Sample means pooled across age groups are shown in Table 1. For most outcomes mothers and fathers depict similar levels of satisfaction. Interestingly, the levels of satisfaction are also similar across outcomes. Overall, individuals in our sample show quite high levels of satisfaction ranging between 5.8 and 8.4.

4.5 Control Variables

To account for other factors that might confound the effect of grandparental care on child outcomes and family well-being, our models include extensive sets of control variables on (grand-)parental, child and household level. Generally, we include socio-economic characteristics such as education, age, income, labor force status, gender, federal state of residence and migration background. Additionally, we include detailed information about the “child” situation of the household (e.g. number of children in the household and age of the youngest child). In order to isolate effects of grandparental care on parental well-being from effects that are driven by the quality of the relationship between parents and grandparents, we control for emotional closeness between parents and grandparents in all specifications. A detailed overview of the set of control variables for each outcome variable is given in Table B.1 in the Appendix.

4.6 Sample and Descriptive Statistics

To evaluate the effects on child outcomes and parental satisfaction with the child care situation, we conduct the analysis on child level where each child constitutes one observation. We restrict the overall sample to all children younger than 11. The analysis sample for all other parental outcomes is restricted to all individuals that have at least one child which is younger than 11 years. These analyses are conducted at the parental level. This means that each parent counts as one observation. For each parent we use information on all his or her biological children as well as adopted and stepchildren living in the same household. We restrict the samples to families with children in pre-school and elementary school age (younger than 11) as young children require more care than older children. Moreover, we exclude all families in which both parents are born outside of Germany. In these cases, it is highly likely that all four grandparents do not live in Germany and are therefore not available for regular childcare (e.g. Gambaro et al., 2018). We observe both samples from 2009 until 2019.

Our final sample to analyze parental outcomes includes 15,038 observations for fathers (corresponding to 3,953 fathers) and 18,631 observations for mothers (corresponding to 4,674 mothers). The sample to analyze child outcomes includes 42,023 observations which corresponds to 11,489 children. Table 2 includes summary statistics of selected control variables based on the sample on child level. Column 1 and 2 show mean and standard deviation

for selected control variables across all observations. Column 3 and 4 only include children that receive grandparental care and Column 5 and 6 only children that are not cared for by the grandparents. Comparing the two groups suggests differences in many socio-economic characteristics. The share of non-employed mothers is about 40% for children who are not cared for by their grandparents compared to 25% for children in grandparental care. These mothers seem to be mostly part-time employed as the share of mothers employed part-time is larger with grandparental care (55% with grandparental care vs. 42% without grandparental care) while there is only a small difference in mothers in full-time employment (20% vs. 18%). Furthermore, children who have at least one parent with migration background are less often cared for by their grandparents. Children in grandparental care tend to have fewer siblings and are on average younger compared to children not in grandparental care. Other characteristics such as household net income, education, age of mother and child or gender depict only small differences between the two groups. The differences in socio-economic characteristics emphasize the importance to include our extensive set of control variables as mentioned in section 4.5.

Table 2: Summary Statistics

	All		Grandparental care		No grandparental care	
	Mean	SD	Mean	SD	Mean	SD
<i>Mother's labor force status (in percent)</i>						
Mother not working (in %)	36.46		24.48		40.09	
Mother working part-time (in %)	45.24		55.32		42.19	
Mother working full-time (in %)	18.30		20.20		17.72	
<i>Household's highest parental educational degree (in percent)</i>						
No/ lower secondary degree (in %)	4.02		2.09		4.61	
Upper Secondary/voc. degree (in %)	38.03		36.95		38.35	
University degree (in %)	57.95		60.96		57.03	
One parent has mig. backgr. (in %)	11.05		9.29		11.58	
Household net income (in Euro)	3665.16	2456.25	3837.49	2537.30	3612.89	2428.78
Age mother (in years)	35.58	5.66	35.41	5.53	35.64	5.69
Sex child: male (in %)	50.89		51.43		50.72	
Age child (in years)	4.80	3.10	4.65	2.99	4.85	3.13
Number of children in household	2.11	0.91	1.92	0.75	2.17	0.95
At least one parent sick (in %)	18.74		16.61		19.38	
Cohabitation with partner (in %)	94.15		93.78		94.27	
Observations	28410		6690		21720	

Pairfam (2008-2019), weighted, own calculations. These statistics are calculated based on the child level data set.

4.7 Mechanisms

– *This chapter still needs to be written, the current version summarizes arguments to be discussed* –

In this paper, we explore several mechanisms through which grandparental care could affect child and parental outcomes.

HYPOTHESIS for negative effects on children’s socio-emotional behavior: grandparents less strict, consider themselves less as educator, child learns less about his or her borders and is less disciplined

HYPOTHESIS for positive effect on children’s socio-emotional behavior: Grandparents act as close reference person, very individual one-to-one care

HYPOTHESIS for negative effects on children’s health: potentially grandparents are less mobile and thus children get less exercise, potentially more unhealthy food because of a less strict attitude of grandparents towards children compared to parents/daycare teachers

HYPOTHESIS for positive effects on children’s health: potentially healthier diet as grandparents have time to prepare home-made food, grandparents have more time to bring children to sports activities

The literature on the effects of daycare enrollment on children’s non-cognitive outcomes finds mixed results. Reasons for the discrepancies are for example the quality of the daycare center and the targeted population (general vs. disadvantaged). High-quality programs targeted toward at-risk children such as Head Start and the Abecedarian program in the US are prominent examples that exhibit positive short- and long-run effects on children’s non-cognitive skills (e.g. Carneiro and Heckman, 2003; Heckman et al., 2010, 2013). In contrast, evidence on broader programs is more mixed (see e.g. Baker (2011) or Cascio (2015) for recent literature overviews). For example, evaluations of the introduction of very low cost universal child care for 0-4 years olds in Quebec, Canada show negative effects on non-cognitive child outcomes (e.g. Baker et al., 2008, 2019; Kottelenberg and Lehrer, 2013). These effects persist when the children age. In contrast, Gupta and Simonsen (2010) find formal care to be as good as parental care regardless of mother’s level of education in Denmark. Based on this, there might be differential effects on children’s non-cognitive outcomes by children’s socio-economic background as well as by grandparental education.

INSERT [Differential effects by child age expected, elaborate on literature that show age-specific effects of daycare on child outcomes]

INSERT [Differential effects by child gender? It is known from the literature that boys’ socio-emotional behavior is less stable and thus might be influenced more by grandparental

care than on average more emotionally stable girls at younger ages?]

Grandparental care has been shown to be associated with increased maternal employment (e.g. Bratti et al., 2016; Compton and Pollak, 2014; Fenoll, 2020; Kanji, 2018). Both Compton and Pollak (2014) as well as Kanji (2018) find close geographical proximity to mothers or mothers-in-law to have a substantial positive effect on the labor supply of women with young children for the US and the UK respectively. Fenoll (2020) and Bratti et al. (2016) confirm these results for Europe and point out that the effects are concentrated on countries with limited family policies and strong family ties. Further, it has been shown that labor supply and maternal well-being is interrelated (e.g. Berger, 2009; Chatterji et al., 2011). Chatterji et al. (2011) find a positive association with working hours and mother's depression, parenting stress and overall health at 6 months in the US. In contrast, Berger (2009) finds for Germany that maternal part-time employment as well as being out of the labor force is associated with lower maternal life satisfaction in comparison to full-time employment. Thus, we expect to find differential effects by maternal labor force status on different aspects of parental satisfaction.

HYPOTHESIS for positive effects on parental satisfaction with leisure/social contacts etc.: grandparental care could provide parents with more time for themselves leading to improved satisfaction with their leisure time use or social contacts.

HYPOTHESIS for negative effects on parental satisfaction with education/career/work-life balance etc.: grandparental care is a less stable and continuous care option compared to daycare which in turn could lead to more stress reconciling work and child care resulting in decreased satisfaction with the career or the work-life-balance.

INSERT [We might expect differential effects for mothers and fathers as mothers are still the main care givers, grandparental care might mainly affect their reconciliation of work and family life and thus their well-being might be more affected.]

INSERT [We also expect different effects by East/West for all outcomes as grandparental care is much more common in the West and has no tradition in East Germany due to historical reasons as the supply for day care for children from the early ages was and still is higher than in West Germany.]

5 Empirical strategy

In this paper we aim to estimate the causal effect of grandparental care on child and family outcomes. In order to do so, we first estimate the following OLS model

$$y_{it} = \beta_1 + \beta_2 GPC_{it} + X'_{it}\beta_3 + \mu_{it} \quad (1)$$

where y_{it} are the different child and parent outcome variables described in chapter 4.3 and 4.4. The variable of interest, GPC_{it} , is a binary variable that equals unity if the child is cared for by the grandparents in the child outcome regressions and equals unity if at least one child of this parent is cared for by the grandparents in the parental outcome regressions (as described in section 4.2). X'_{it} is our vector of control variables described in section 4.5.

However, employing the OLS model in Equation 1 does not necessarily produce estimates that can be interpreted causally. The identification of a causal effect of grandparental care on child and family outcomes faces potential endogeneity threats. This means that the grandparental care variable might be correlated with the error term (Wooldridge, 2010). One potential problem could be an omitted variable bias. The choice for grandparental care is endogenous as it is made by parents and grandparents and might be influenced by unobservable characteristics that also influence the outcome variables. One example of such an unobservable variable is grandparent's preferences for taking care of their grandchild. This probably influences the amount of support they offer and might also affect our outcomes. Another threat could be reverse causality as for example parental well-being might influence how much support from the grandparents they need and demand. Similarly, children's health or socio-emotional problems might affect the decision to ask grandparents for help. For example, parents with children who suffer from bad health might fear that taking care of these children is too much of a burden for grandparents.

Thus, estimating Equation 1 might lead to a biased and inconsistent estimator of grandparental care and would not reflect a causal effect (Verbeek, 2008). The bias of the OLS estimates could go in either direction: There are reasons to expect both upward biased and downward biased estimates. For example, if only healthy and socio-emotionally stable children are in grandparental care, we expect the OLS estimator to be upward biased. Alternatively, if we expect that parents with low subjective well-being are more likely to ask grandparents for childcare assistance because they are more in need of help due to their

lower well-being, the OLS estimator would be downward biased. We cannot account for the endogeneity issues by including confounding factors as control variables as some of them are not observed.

A large share of the literature on daycare makes use of daycare reforms, such as the introduction of a legal entitlement for a daycare spot for children above three years in 1996 in Germany. In contrast, informal child care arrangements like grandparental care are at least not directly targeted by such reforms.⁸ Therefore, to overcome the endogeneity problem we use an instrumental variable, applying a two-stage-least-squares (2SLS) approach.

5.1 Instrumental Variable

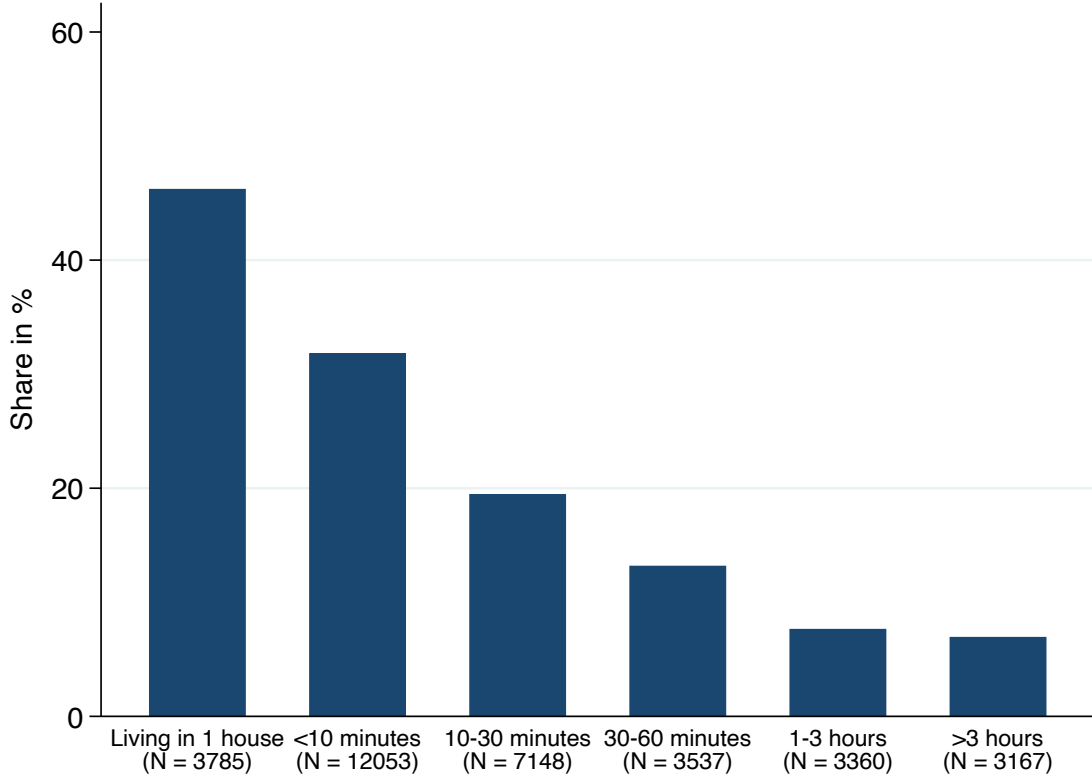
To apply a 2SLS approach, we need a variable that can be used as an instrument. We use the distance to the grandparents as an instrument. This instrument was also used by Del Boca et al. (2018) and Compton and Pollak (2014). The distance to the grandparents is part of the anchor as well as the partner questionnaire in pairfam and is asked in all waves with the following question: “How much time do you need to get to your mother’s dwelling? (on a normal day, using normal means of transportation)”. In cases in which the anchor’s or partner’s parents do not live in one household, they are asked the same question about the distance to the father’s dwelling. The distance is measured as a categorical variable with the following six categories: “we live in one house”, “less than 10 minutes”, “10 minutes to less than 30 minutes”, “30 minutes to less than 1 hour”, “1 hour to less than 3 hours” and “3 hours or more”.

Based on this we construct a binary variable which equals unity if at least one grandparent lives closer than 30 minutes and equals zero otherwise. We employ this binary variable because the relationship between the distance and the amount of grandparental care provided is unlikely to be linear. For example, the difference between living 10 or 30 minutes away should have a larger impact than the difference between 3 hours and 3 hours and 20 minutes. We use 30 minutes as the cut off, as this is a reasonable distance which still allows commuting within one day when giving care to a grandchild. The distribution of the ordinal distance variable used to construct our instrument and the grandparental care variable can be seen in Figure 4 (next chapter). This figure shows the share of children that are in grandparental care by the minimum distance of this child to the grandparents. It can be

⁸The only reforms used in the grandparental care literature are pension reforms that affect the availability of grandparents to provide child care.

seen that most children live close to at least one grandparent. In the whole sample, about 68 percent of households live less than 30 minutes away from at least one grandparent.⁹ Additionally, it can be seen that the share of households that use grandparental care is non-linearly increasing with decreasing distance.

Figure 4: Grandparental care by distance



Note: The figures show the share of children cared for by grandparents by the distance between the child's household and the closest living grandparent. A child is counted as cared for by the grandparents in this graph if the child is cared for by its grandparents in the morning or afternoon or both. *Source:* Pairfam (2009-2019), weighted, own calculation.

5.2 Two-Stage Least Squares

The 2SLS approach consists of two stages. In the first stage regression, we regress the grandparental care variable, that we assume to be endogenous, on our instrument and the exogenous control variables:

$$GPC_{it} = \gamma_1 + \gamma_2 D_{it} + X'_{it} \gamma_4 + \varepsilon_{it} \quad (2)$$

⁹This percentage is weighted and based on the child data set. In the parental level data set, 70 percent of households live closer than 30 minutes away from at least one grandparent.

where D_{it} equals one if the household lives less than 30 minutes away from at least one grandparent and 0 otherwise and X'_{it} is the same vector of control variables as in Equation 1 (Wooldridge, 2010). The dependent variable GPC_{it} is the binary grandparental care variable from Equation 1. The first stage regression is estimated using Ordinary Least Squares. Since the dependent variable is binary, this corresponds to a linear probability model (LPM). We argue for the use of this model as opposed to more conventional non-linear models such as the binary logistic or probit regression models, because LPM generates first-stage residuals that are uncorrelated with the control variable and fitted values (Angrist and Pischke, 2008). Furthermore, Hellevik (2009) and Angrist and Pischke (2008, pp. 104-107) argue that in many applications LPM generates similar estimates to logit models. In a robustness check we conduct the so-called “garden-variety” as suggested by Angrist and Pischke (2008). In this procedure one estimates a probit model for the first stage regression and predicts the fitted values after this regression. These non-linear fitted values are then included as an additional instrument in the first stage regression using OLS.¹⁰

In the second stage, the fitted values of the linear probability model from the first stage \widehat{GPC}_{it} are included as the main explanatory variable (Wooldridge, 2010):

$$y_{it} = \beta_1 + \beta_2 \widehat{GPC}_{it} + X'_{it} \beta_3 + \mu_{it} \quad (3)$$

In this regression y_{it} are the different child and parental outcome variables described in chapter 4.3 and 4.4. X'_{it} is again our vector of control variables that is the same as in the first stage regression. β_2 is our coefficient of interest and reflects the 2SLS estimator¹¹. It estimates the local average treatment effect (LATE)¹² and thus depicts the effect of grandparental care on our outcomes. The robust standard errors μ_{it} are clustered at the household level for all regressions using child outcomes and the parental satisfaction with the child care situation because the observations of different children in one household might be correlated with each other and as a result the i.i.d assumption would not hold (Cameron and Trivedi, 2005). Clustering at the household level allows individuals to be correlated within households and across time. Robust standard errors are used for all other parental

¹⁰Results will be included as we proceed with the paper.

¹¹The 2SLS estimator is identical to the instrumental variables estimator since we use only one instrument for grandparental care (Wooldridge, 2010). Therefore, we use the terms “2SLS estimator” and “IV estimator” interchangeably.

¹²It measures the effect on the compliers, i.e., those families whose utilization of grandparental care is induced by a small distance to the grandparents (Cameron and Trivedi, 2005).

outcomes.

5.3 Instrument Validity

In order for the distance to grandparents to qualify as a valid instrument, it needs to fulfill two conditions: relevance and exogeneity. If both conditions are fulfilled, the instrumental variable estimator is asymptotically normal and consistent (Verbeek, 2008).

Relevance means that the instrument needs to be sufficiently correlated with the endogenous regressor grandparental care (Cameron and Trivedi, 2005). This correlation needs to be large, because otherwise the 2SLS estimator would be biased towards the OLS estimator and the instrument referred to as weak (Angrist and Pischke, 2008). Arguably, the distance to the grandparents satisfies the relevance condition as a smaller distance facilitates child care for grandparents. The correlation between our instrument and grandparental care can also be seen in Figure 4. It is visible that households that live closer to the grandparents use grandparental care more often. The correlation between the instrument and the endogenous regressor is also tested in the first stage regression where the endogenous variable is regressed on the instruments and the exogenous covariates (Angrist and Pischke, 2008). The robust first stage F-statistics displayed in the regression tables in sections 6.1 and 6.2 are all at least 20 but far exceed this value in most regressions. Thus, the F-statistics are all greater than 10, which was suggested by Stock et al. (2002) as a threshold that needs to be passed in order to make sure that the 2SLS results are reliable. This supports our argument.¹³

The more critical assumption is the exogeneity assumption of the instrument which requires that the instrument is not correlated with the error term and thus only influences the outcome variable through the endogenous regressor (Cameron and Trivedi, 2005). It seems plausible that distance only affects child outcomes through grandparental care. It can be argued, however, that living close to the grandparents affects parental well-being not only through grandparental care but also through the relationship to the grandparents and the amount of time parents and grandparents can spend together. To ensure that distance only affects parental outcomes through the grandparental care provided, we control for the

¹³Applying an alternative binary instrument (distance less than one hour vs. more than one hour) and an instrument that contains all six original distance categories also show to be strong instruments. If we use the distance to only the own parents or only the partner's parents, the instrument is still strong according to the first stage F-statistic.

emotional closeness between parents and grandparents.¹⁴

To further test the exogeneity of the distance to the grandparents, we investigate whether distance between parents and grandparents decreases around birth which would indicate that either parents moved closer to the grandparents or grandparents moved closer to the parents. The reason for a systematic moving behavior could be facilitation of grandparental child care, which would make distance an endogenous variable. Investigations of the moving behavior in the year before and after birth of the first-born or any child show no systematic movement towards the grandparents (see Table C.2 in the appendix). We conducted further robustness checks to test the exogeneity assumption in section 6.3.

6 Empirical Results

In the following, we present the estimation results of the OLS and IV estimation and discuss how grandparental care affects the non-cognitive child and parental satisfaction outcomes as defined above.

6.1 Child Outcomes

We start with the discussion of the effects of grandparental care on child outcomes which are depicted in Tables 3 and 4. Table 3 displays the effects on children’s general health problems and chronic diseases for four different age groups: children younger than three (panel a), children aged 3 to 5.5 (panel b), children between 5.5 and 10 years (panel c) and all children (0-10 years in panel d). The table includes the coefficient on grandparental care from the second stage regression (Equation 3) denoted as “Grandparental care” as well as the number of observations, the first stage F-Statistic and the mean of each outcome variable for the four different age groups. As high values in the general health variable correspond to bad health, the coefficient in column 2 of Panel (d) suggests that grandparental care has a negative effect on the health of children below the age of 11. More precisely, the health of children that are cared for by their grandparents decreases by 25 percent in comparison to the mean. The effect seems to be mostly driven by children above the age of 2 as the coefficients in panel b and c are of similar magnitude and significance. Cornelissen et al. (2018) find for daycare usage in Germany positive health effects that are similar in

¹⁴An analysis of the correlation between the emotional closeness and grandparental care shows that the spearman correlation is very small. This indicates that it is valid to include emotional closeness as a control variable as we do not face a bad control problem.

magnitude compared to our effects. Namely, they depict a 25% decrease in “compensatory sports needed” at school entry. Baker et al. (2008), however, find negative health effects of a major daycare expansion in Canada, which amounts to 9 percent in comparison to the mean. For children younger than 3 we do not find statistically significant effects.

Table 3 allows the comparison of the OLS and IV estimates. We denote that the OLS estimate (column 1) underestimates the effect of grandparental care for all age groups. As high general health values indicate bad health, OLS estimates smaller negative effects on health for children in grandparental care than the IV estimator. This finding supports our hypothesis that parents with children with bad health tend to not ask grandparents for help. Additionally, column 4 suggest that grandparental care does not significantly affect children’s chronic diseases. This is intuitive as chronic diseases in contrast to general health are less likely affected by children’s lifestyle.

Table 3: Results: Child health problems

	OLS: General Health (1)	IV: General Health (2)	OLS: Chronic dis. (3)	IV: Chronic dis. (4)
	Scale: 1-5		Dummy variable	
(a) Age: 0-2 years				
Grandparental care	0.0311 (0.0489)	0.385 (0.317)	-0.0173 (0.0164)	0.153 (0.0967)
Observations	1848	1829	2294	2266
<i>F – statistic</i>		51.958		57.555
<i>Mean</i>		1.560		0.074
(b) Age: 3-5.5 years				
Grandparental care	0.00779 (0.0411)	0.387* (0.188)	-0.0400* (0.0157)	-0.127 (0.0828)
Observations	3020	2997	3615	3579
<i>F – statistic</i>		88.283		104.544
<i>Mean</i>		1.567		0.115
(c) Age: 5.5-10 years				
Grandparental care	0.0681 ⁺ (0.0348)	0.318* (0.150)	-0.0202 (0.0174)	-0.146 (0.0886)
Observations	5076	5042	5734	5696
<i>F – statistic</i>		133.038		144.971
<i>Mean</i>		1.561		0.149
(d) Age: 0-10 years				
Grandparental care	0.0420 (0.0271)	0.391** (0.146)	-0.0170 (0.0124)	-0.0771 (0.0695)
Observations	11000	10918	12764	12654
<i>F – statistic</i>		158.157		171.823
<i>Mean</i>		1.566		0.128

Note: Robust standard errors clustered at the household level in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The general health problems variable is an ordinal variable on a scale from 1 (good health) to 5 (bad health).

The chronic diseases variable is a binary variable which equals 1 for children with a chronic disease and 0 otherwise.

The regressions include the control variables listed in table B.1 column (a) in the appendix.

Source: Pairfam (2010-2019), weighted, own calculation.

The effects of grandparental care on children's socio-emotional problems are displayed in Table 4. Columns 1 and 2 represent the effect on socio-emotional problems, which is the sum of conduct problems, hyperactivity and emotional problems (columns 3 to 8) for children between 3 and 5.5 years years (remember this is the only age group for which this information is available). The IV estimates suggest that grandparental care increases the overall socio-emotional problems by 52% and the emotional problems of children by 66% in comparison to the mean, which are substantial increases. However, the effect on emotional problems is only marginally significant on the 10% significance level. In comparison to that, Baker et al. (2008) found that daycare increases children's emotional disorder–anxiety score by 12 percent. Gupta and Simonsen (2010) find enrollment into family home-care in Denmark to increase the SDQ index by 28%, which corresponds to an increase in adverse behavior. Beyond this, we do not find significant effects on hyperactivity and conduct problems. The OLS estimator on the other hand suggests grandparental care to be associated with fewer socio-emotional problems. Similar to child health, this might be attributed to the fact that parents whose children have socio-emotional problems do not want to overstrain grandparents and thus there is a selection of children with fewer socio-emotional problems into grandparental care. Tables including all control variables can be found in the Appendix in section D. ; Kröll and Brock 2013)

Table 4: Results: Socio-emotional problems (Age: 3-5.5 years)

	OLS: Socio-emotional (1)	IV: Socio-emotional (2)	OLS: Conduct (3)	IV: Conduct (4)
	Scale: 0-12		Scale: 0-4	
Grandparental care	-0.326** (0.113)	1.535* (0.783)	-0.0111 (0.0621)	0.447 (0.376)
Observations	2122	2114	2123	2115
F-Statistic	45.635		45.662	
Mean	2.937		1.122	
	OLS: Hyperactivity (5)	IV: Hyperactivity (6)	OLS: Emotional (7)	IV: Emotional (8)
	Scale: 0-4		Scale: 0-4	
Grandparental care	-0.175** (0.0565)	0.519 (0.344)	-0.142** (0.0494)	0.566 ⁺ (0.302)
Observations	2125	2117	2123	2115
F-Statistic	45.687		45.722	
Mean	0.962		0.852	

Note: Robust standard errors clustered at the household level in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables conduct problems, hyperactivity and emotional problems are ordinal variables on a scale from 0 (does not apply) to 5 (fully applies). The outcome variable socio-emotional problems is constructed summing up the three other indices, resulting in a variable that ranges from 0 (does not apply) to 12 (fully applies). The regressions include the control variables listed in table B.1 column (b) in the appendix. *Source:* Pairfam (2012-2019), weighted, own calculation.

6.2 Parental Outcomes

In addition to the effects on children, we analyze how grandparental care affects parental satisfaction, shown in tables 5 and 6. All tables report the coefficient of grandparental care from the second stage regression, the number of observations, the first stage F-statistics and the mean of each outcome variable. All models include a large vector of control variables described in section 4.5 and Table B.1. The effects for all mothers or fathers in the sample are shown in panel (d) and analyses for subgroups by the age of the children are shown in panel (a) to (c). Mothers or fathers are counted into a subsample if at least one of their children falls into this age range. Tables including the coefficients of all control variables can be found in the Appendix in section E.

Table 5 shows the OLS and IV estimates of the effect of grandparental care on maternal satisfaction with the child care situation (column 1 and 2), maternal life satisfaction (column 3 and 4), maternal satisfaction with her education and career (column 5 and 6), maternal satisfaction with leisure and hobbies (columns 7 and 8), social contacts and friends (column 9 and 10), relationship (column 11 and 12) and the work-life balance (column 13 and 14). The effects of grandparental care on the maternal satisfaction outcomes displayed are mostly positive suggesting that grandparental care increases maternal satisfaction. Panel (d), which is based on the sample including all mothers with children between 0 and 10 years, depicts statistically significant effects for mother's satisfaction with the childcare situation and for mother's satisfaction with her leisure time. The effects correspond to an increase of 14% for satisfaction with the childcare situation and 18% for satisfaction with leisure compared to the mean. The effects on satisfaction with the childcare situation can be mostly attributed to mothers with small children (0 to 2 years, panel (a)). The effect is largest in magnitude among the three age groups and the estimate suggests an increase that corresponds to 22% compared to the mean. Furthermore, it is attributable to mothers with children aged 3 to 5.5 (panel (b)) as this effect, like the effect for mothers with children younger than 3, is marginally significant at the 10% significance level. The effect on satisfaction with leisure is largely due to mothers with children in elementary school age (5.5 to 10 years, panel (c)) and very young children (0 to 2 years, panel (a)). The effects are highly statistically significant and both correspond to a 23% increase.

Table 5: Results: Mothers' satisfaction

	OLS: Child care (1)	IV: Child care (2)	OLS: General (3)	IV: General (4)	OLS: Educ./career (5)	IV: Educ./career (6)	OLS: Leisure (7)	IV: Leisure (8)	OLS: Contacts (9)	IV: Contacts (10)	OLS: Relationship (11)	IV: Relationship (12)	OLS: Work-life balance (13)	IV: Work-life balance (14)
Scale: 0-10														
(a) Age: 0-2 years														
Grandparental care	0.0156 (0.240)	1.900+ (1.030)	-0.0823 (0.0854)	0.0871 (0.397)	0.0673 (0.120)	0.440 (0.548)	0.186 (0.136)	1.392* (0.612)	-0.0199 (0.117)	0.0879 (0.517)	0.155 (0.119)	0.0285 (0.486)	-0.303 (0.249)	-1.999* (0.807)
Observations	785	776	2002	1980	1922	1901	2002	1980	2002	1980	1912	1899	527	522
<i>F – statistic</i>		22.880		90.102		88.744		90.102		90.102		90.101		35.692
<i>Mean</i>		8.555		7.933		7.165		6.031		7.217		7.764		6.360
(b) Age: 3-5.5 years														
Grandparental care	0.152 (0.158)	1.520+ (0.898)	0.0420 (0.0836)	0.147 (0.359)	0.187+ (0.103)	-0.311 (0.490)	-0.0119 (0.120)	0.372 (0.517)	-0.106 (0.110)	-0.128 (0.457)	-0.0105 (0.119)	-0.558 (0.560)	-0.116 (0.186)	1.068 (0.921)
Observations	1532	1521	2223	2204	2173	2154	2222	2203	2223	2204	2098	2084	896	893
<i>F – statistic</i>		34.411		105.306		104.591		105.450		105.306		96.594		31.976
<i>Mean</i>		8.438		7.765		7.307		6.205		7.273		7.499		6.149
(c) Age: 5.5-10 years														
Grandparental care	0.0612 (0.116)	0.967+ (0.542)	0.0409 (0.0698)	0.404 (0.318)	0.0143 (0.0955)	0.357 (0.426)	-0.0878 (0.101)	1.481** (0.479)	0.0602 (0.0910)	1.037* (0.431)	0.226* (0.107)	0.615 (0.483)	-0.299+ (0.152)	0.0426 (0.606)
Observations	2821	2799	3117	3090	3069	3043	3118	3091	3118	3091	2862	2850	1511	1497
<i>F – statistic</i>		67.949		145.947		145.901		145.581		145.581		139.556		81.760
<i>Mean</i>		8.465		7.689		7.244		6.393		7.330		7.480		6.484
(d) Age: 0-10 years														
Grandparental care	0.0546 (0.104)	1.201* (0.544)	-0.0240 (0.0505)	0.104 (0.234)	0.107 (0.0683)	0.215 (0.308)	-0.000889 (0.0745)	1.133*** (0.332)	-0.00955 (0.0670)	0.579+ (0.299)	0.112 (0.0736)	0.316 (0.333)	-0.219+ (0.116)	0.0401 (0.436)
Observations	5771	5724	5869	5804	5752	5689	5869	5804	5870	5805	5430	5396	2520	2497
<i>F – statistic</i>		71.624		297.473		294.384		297.261		297.180		285.896		149.507
<i>Mean</i>		8.473		7.764		7.236		6.327		7.314		7.563		6.394

Note: Robust standard errors in parentheses. For the outcome “Child care”, robust standard errors clustered at the household level. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Child care: satisfaction with the child care situation on child level, all other (outcomes on parental level), General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies, Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (c) for the outcome “Child care” and (d) for all other outcomes in the appendix. *Source:* Pairfam (2010-2019), weighted, own calculation.

Table 6: Results: Fathers' satisfaction

	OLS: Child care (1)	IV: Child care (2)	OLS: General (3)	IV: General (4)	OLS: Educ./career (5)	IV: Educ./career (6)	OLS: Leisure (7)	IV: Leisure (8)	OLS: Contacts (9)	IV: Contacts (10)	OLS: Relationship (11)	IV: Relationship (12)	OLS: Work-life balance (13)	IV: Work-life balance (14)
Scale: 0-10														
(a) Age: 0-2 years														
Grandparental care	-0.0355 (0.233)	3.099 (2.010)	0.134 ⁺ (0.0791)	0.259 (0.300)	0.126 (0.106)	-1.000* (0.450)	-0.131 (0.123)	0.162 (0.486)	-0.135 (0.119)	-0.0984 (0.485)	-0.0828 (0.123)	-0.343 (0.492)	-0.0132 (0.165)	0.128 (0.678)
Observations	573	565	1769	1738	1767	1736	1769	1738	1768	1737	1768	1737	1026	1018
<i>F – statistic</i>		9.522		88.473		88.939		89.468		89.241		87.569		56.741
<i>Mean</i>		8.668		7.910		7.483		6.263		6.561		7.753		5.823
(b) Age: 3-5.5 years														
Grandparental care	0.336* (0.165)	1.537 ⁺ (0.800)	0.0862 (0.0810)	-0.230 (0.326)	0.000243 (0.107)	-0.977* (0.437)	-0.00420 (0.119)	-0.291 (0.528)	0.0866 (0.117)	0.646 (0.541)	0.131 (0.120)	-0.0474 (0.484)	-0.303 ⁺ (0.173)	-1.689* (0.744)
Observations	1077	1066	1721	1704	1720	1703	1719	1702	1719	1702	1718	1701	963	959
<i>F – statistic</i>		33.117		81.511		81.520		82.139		80.995		80.883		42.722
<i>Mean</i>		8.385		7.739		7.508		6.218		6.511		7.589		5.822
(c) Age: 5.5-10 years														
Grandparental care	0.246* (0.124)	1.789** (0.684)	0.0980 (0.0736)	0.338 (0.358)	-0.0689 (0.0869)	-0.221 (0.437)	-0.151 (0.106)	-0.198 (0.504)	-0.106 (0.105)	1.597** (0.571)	0.0573 (0.119)	0.380 (0.621)	-0.381* (0.158)	-1.155 ⁺ (0.658)
Observations	1897	1886	2075	2060	2075	2060	2075	2060	2075	2060	2072	2057	1234	1232
<i>F – statistic</i>		40.232		87.689		87.808		89.052		87.587		87.041		61.840
<i>Mean</i>		8.511		7.743		7.548		6.501		6.770		7.649		5.902
(d) Age: 0-10 years														
Grandparental care	0.265* (0.112)	1.898** (0.664)	0.0387 (0.0495)	0.143 (0.222)	0.0264 (0.0672)	-0.730* (0.306)	-0.133 ⁺ (0.0751)	-0.0547 (0.342)	-0.0944 (0.0731)	0.591 ⁺ (0.356)	0.0104 (0.0803)	-0.228 (0.377)	-0.281** (0.108)	-0.586 (0.440)
Observations	3967	3936	4242	4196	4238	4192	4241	4195	4241	4195	4239	4193	2505	2494
<i>F – statistic</i>		46.002		202.568		203.082		203.992		202.670		201.761		145.104
<i>Mean</i>		8.492		7.818		7.532		6.441		6.727		7.687		5.910

Note: Robust standard errors in parentheses. For the outcome “Child care”, robust standard errors clustered at the household level. ⁺ $p < 0.10$, ⁺ $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Child care: satisfaction with the child care situation on child level, all other (outcomes on parental level), General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies, Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (c) for the outcome “Child care” and (d) for all other outcomes in the appendix. *Source:* Pairfam (2010-2019), weighted, own calculation.

Interestingly, the IV estimates for social contacts are very small or even negative for mothers with younger children (panel (a) and (b)) and positive for mothers with children in elementary school age (panel (c)). The overall effect for all mothers is also positive (panel (d)). However, only the effect in panel (c) is statistically significant and largest in magnitude across all age groups (14 % increase), while the overall effect is only marginally significant on the 10% level. The IV estimates for satisfaction with the relationship are positive across all age groups except preschool-aged children (panel (b)), but too imprecisely estimated to be significantly different from zero. The results in panel (a) suggest, that grandparental care significantly decreases the satisfaction with work-life balance for mothers with children below the age of 3. The effect is quite large (31% decrease) and is statistically significant on the 5% level. The negative effect for mothers with very young children might be attributed to mother's who restart into employment as a consequence of the care provided by the grandparents. We will investigate this hypothesis in further subsample analyses. For all other age groups, the effects are positive, but too imprecisely estimated to be significantly different from zero.

A comparison of the IV and OLS estimates shows that for most maternal satisfaction outcomes the OLS estimator underestimates the effects of grandparental care. One explanation for this could be that parents with low well-being require help and thus make more use of grandparental care. In several cases however, the OLS is upward biased. Comparing our effects with effects of publicly funded day care attendance on maternal life satisfaction depicted by Schmitz (2019), shows that our effects are larger in magnitude. Our effects range between 14 and 31% depending on the outcome variable, while Schmitz (2019) finds an 8% increase in comparison to the mean.

Finally, we analyze how grandparental care affects paternal satisfaction measured with the same variables as maternal satisfaction. The results can be found in Table 6. Just as for mothers, grandparental care increases fathers' satisfaction with the child care situation significantly. The effects are positive across all age groups and statistically significant for all age groups except for the youngest. The overall effect depicted in panel (d) amounts to an increase of approximately 22 percent compared to the mean. Additionally, child care provided by the grandparents decreases fathers' satisfaction his career and education by 10% in comparison to the mean. This effect is mostly driven by fathers with children below school age. Furthermore, we find a statistically significant and positive effect of

grandparental care on the satisfaction with social contacts of fathers with children aged 6 to 10 years. This effect corresponds to a 24% increase in comparison to the mean. Similar to mothers, we find a large negative effect of grandparental care on the satisfaction with work-life balance for fathers with preschool-aged children (29% decrease compared to the mean) which is also marginally significant for fathers with school-aged children.

6.3 Robustness

To further test the exogeneity of the used instrument, we conduct several robustness checks. First, we use the distance to the individual's parents-in-law as an instrument without considering the own parents. The idea behind this is that the relationship beyond childcare is usually closer to your own parents compared to your parents-in-law. Thus, in case the distance to the own parents has some effect on parental satisfaction through some factor other than childcare that we cannot control for, this should be ruled out when using the distance to the parents-in-law. The instrument turns out to be a strong instrument, measured by the first stage F-statistic. Generally the results are similar to our main results. However, the effects on paternal satisfaction with education and career, social contacts, and work-life balance are not statistically significant anymore (see section F in the appendix).

Secondly, we check the sensitivity of our results concerning the definition of our instrument. We conduct the analyses with an ordinal instrument consisting of 6 categories as well as a different binary instrument that equals 1 for all distances shorter than 1 hour away.¹⁵

Thirdly, we estimate the same regressions as in the main analysis for childless households. With this analysis we provide further evidence that our specification isolates the effects of grandparental care on parental well-being, i.e. we control for all other channels through which distance affects parental well-being. If this is the case, we expect no effects of distance to grandparents on parental well-being for childless households. Tables G.30 and G.31 suggest that there are no statistically significant effects of distance on well-being for both women and men.¹⁶

As some children enter school at age 5 while others only enter it at age 7, it is not clear how to categorize our sample in the different age groups in the most sensible way. In order to

¹⁵The results are available from the authors upon request.

¹⁶Because individuals in childless households are on average younger than parents in households with children in pairfam (the mean age of childless individuals is 29.28 and that of our baseline sample is 37.08), we exclude the youngest quartile of the sample in order to make the childless sample more comparable to our main sample.

check the sensitivity of our results towards slightly different definitions of our age groups, we redefine age group 3 to 5.5 as 3 to 5.9 and age group 5.5 to 10 to 6 to 10 years. This definition entails that fewer children are counted as elementary school children. The results are shown in the Appendix in section H and show very similar estimates compared to our main analysis. Thus, our analysis seems robust to different definitions of the age groups.

6.4 Subsample analysis

SUBSAMPLE ANALYSES TO COME

6.4.1 Analysis by gender of children

6.4.2 Analysis by East/West

6.4.3 Analysis by labor force status of the mother

6.4.4 Analysis by (grand-)parental education

6.4.5 Analysis by daycare/school (0-2 years: daycare vs. no daycare; >2 years only morning vs. full-time)

7 Conclusion

In this paper, we investigate how grandparental care is associated with non-cognitive skills of children and parental well-being. A growing number of studies provide evidence of the importance of children’s non-cognitive skills and parental well-being for educational, health, and labor market outcomes. We extend the literature on grandparental care by estimating the causal effects on children’s non-cognitive outcomes and parental well-being. To overcome endogeneity between grandparental care and our outcomes, we employ an instrumental variable approach instrumenting grandparental care with the distance to the grandparents.

Using the representative panel data set pairfam, our preliminary results provide evidence for null or negative effects on children and positive as well as negative effects on different aspects of parental satisfaction. However, the results very much differ by child age. We find that grandparental care decreases the health of elementary school children and children in “Kindergarten-age” and increases children’s emotional problems for children in “Kindergarten-age”. Additionally, we provide evidence that grandparental care increases satisfaction of both mothers and fathers with the child care situation and social contacts for both parents and exhibits positive effects on maternal satisfaction with leisure. In contrast, we find negative effects of grandparental care on work-life balance for parents with younger children and a decrease in paternal satisfaction with his education and career. This shows that not only parental care and daycare affect child and family outcomes but that child care provided by grandparents also has an impact on children and parents and thus the family as a whole.

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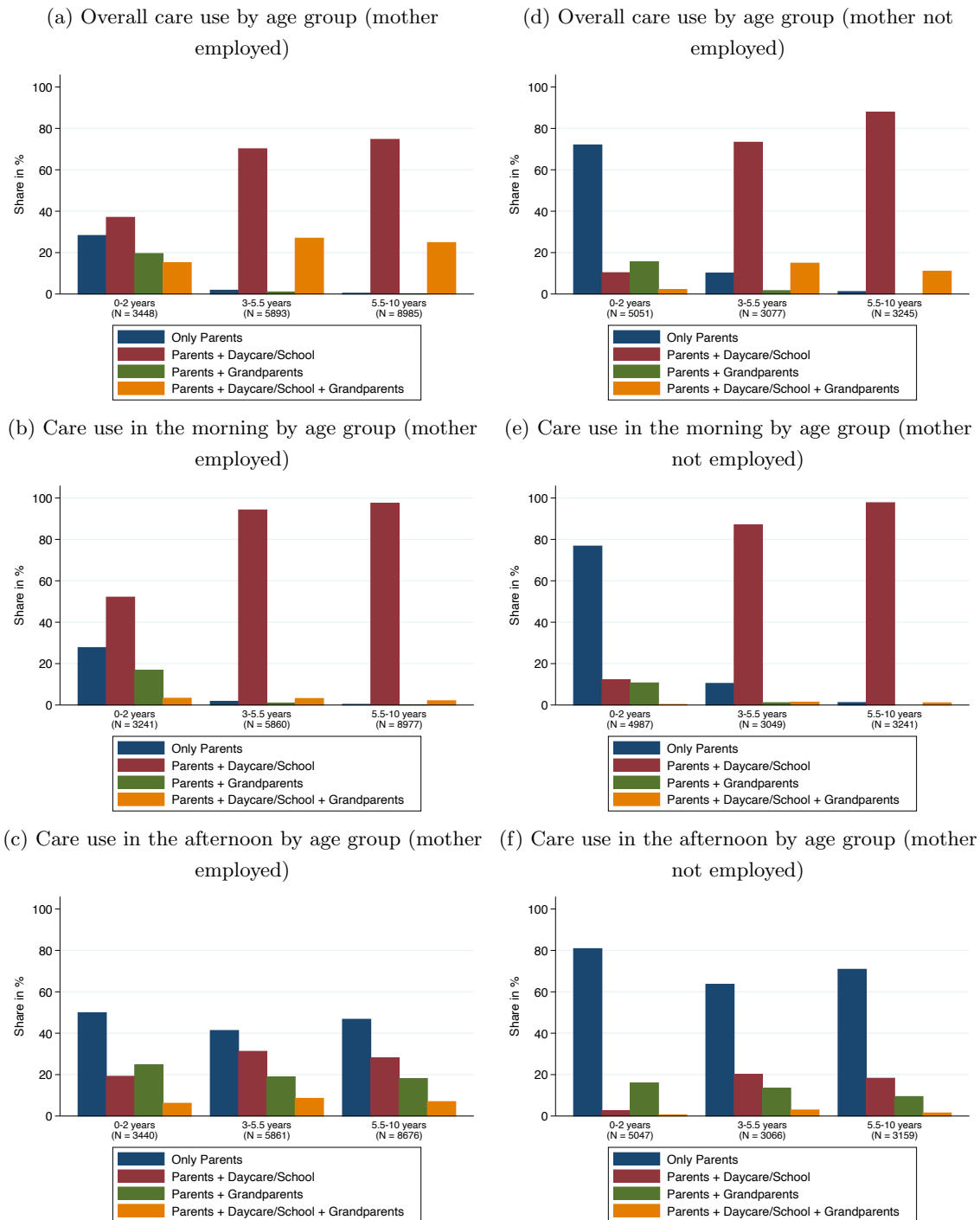
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Appendices

A Care patterns by maternal employment

Figure A.1: Care patterns by maternal employment



Note: The figures show the care use by age group for children of employed (a-c) and not employed mother (d-f). Overall care use takes all actors either caring for the child in the morning or afternoon or both into consideration. *Source:* Pairfam (2009-2019), weighted, own calculation.

B Control variables

Table B.1: Control variables

			To estimate effects on			
Variable	Definition	Type	Children		Parents	
			(a)	(b)	(c)	(d)
<i>Parental Variables</i>						
Post-secondary education	Highest degree in household, 1-3	Ord	✓	✓		
	Individual education, 3 levels	Ord			✓	✓
Mother's labor force status	Parental level, 1-3	Ord	✓	✓	✓	✓
Father's labor force status	Parental level, 1-3	Ord	✓	✓	✓	✓
Age	Mother's age	Cont	✓	✓		
	Individual age	Cont			✓	✓
Religion	Individual religion, 1-7	Cat			✓	✓
Migration background	Both parents have direct background	Bin	✓	✓		
	Individual has direct background	Bin			✓	✓
Partner information	Partner answered questionnaire	Bin	✓	✓		
Parental goals	Importance nutrition and exercise, 1-10	Ord	✓			
Health	At least one parent is sick	Bin	✓	✓		
	Individual health, 1-5	Ord			✓	✓
Obesity	At least one parent is obese	Bin	✓	✓		
	Individual is obese	Bin			✓	✓
Pregnancy	Parent is pregnant	Bin	✓	✓	✓	✓
In a relationship		Bin			✓	✓
Cohabitation	Parents live together	Bin	✓	✓	✓	✓
Widowhood	One parent is widowed	Bin	✓	✓	✓	
	Individual is widowed	Bin				✓
Only child	At least one parent is only child	Bin	✓	✓		
	Individual is only child	Bin			✓	✓
Satisfaction childcare	On the child level, 1-10	Ord		✓		

Continued on the next page

Table B.1 continued

			To estimate effects on			
Variable	Definition	Type	Children		Parents	
			(a)	(b)	(c)	(d)
<i>Child Variables</i>						
Sex	Child's sex	Bin	✓	✓	✓	
	Children in HH: male, female, mixed	Cat				✓
Child age	In months	Cont	✓	✓	✓	
	Age of youngest child in months	Cont				✓
Number children in HH	Total	Cont	✓	✓	✓	
	Nr. children 0-2 years	Cont				✓
	Nr. children 3-5 year	Cont				✓
	Nr. children 6-10 year	Cont				✓
	Nr. other children	Cont				✓
Birth order	Age in comparison to sibling's age	Ord	✓	✓	✓	
Daycare use	Child (0-5 years) in daycare	Bin	✓	✓	✓	
	Number of children (0-5 years) in daycare	Cont				✓
Health	Child health, 1-5	Ord		✓	✓	
	Mean health children, 1-5	Ord				✓
Temperament	Child 0-6 years, 1-20	Ord		✓		
<i>Grandparent Variables</i>						
Emotional closeness	Between parents and grandparents, 1-5	Ord	✓	✓	✓	✓
School education	Anchor's mother, 1-3	Ord	✓	✓	✓	✓
	Anchor's father, 1-3	Ord	✓	✓	✓	✓
Age	Mean of all available grandparents	Cont	✓	✓	✓	✓
<i>Household (HH) Variables</i>						
Household income	logarithmic, in 1000 €	Cont	✓	✓	✓	✓
Year	number according to wave number	Cont	✓	✓	✓	✓
Federal state	1-16	Cat	✓	✓	✓	✓
Community size	1-7	Ord	✓	✓	✓	✓

Source: Pairfam, 2009-2019. This table shows which variables are used to estimate the effect of grandparental care on: (a) Child's health problems (b) child's socio-emotional problems (c) Parental satisfaction with childcare (d) Other parental satisfaction outcomes. Types: Bin (binary), Cat (categorical), Cont (continuous), Ord (Ordinal).

C Moving analysis

Table C.2: Moving Behavior before and after the birth of a child

In the year before child birth	General movement	Move towards	Move away from
Any grandparents	0.0249 (0.024)	0.0112 (0.021)	-0.0020 (0.020)
Observations	17787	17787	17787
Mother's parents	0.0169 (0.021)	0.0149 (0.017)	-0.0022 (0.016)
Observations	17786	17786	17786
Father's parents	0.0116 (0.021)	-0.0025 (0.017)	0.0110 (0.015)
Observations	16810	16810	16810
In the year after child birth	General movement	Move towards	Move away from
Any grandparents	0.0063 (0.016)	0.0198 (0.014)	-0.0051 (0.013)
Observations	17787	17787	17787
Mother's parents	0.0198 (0.014)	0.0121 (0.011)	0.0072 (0.010)
Observations	17786	17786	17786
Father's parents	-0.0052 (0.014)	0.0077 (0.011)	-0.0103 (0.010)
Observations	16810	16810	16810

Note: Estimated using OLS. Standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. All regressions include individual and household controls described in table B.1 column (d) except for child-level variables. *Note:* Source: Pairfam (2009-2019), own calculations.

D Child outcomes in detail

D.1 Health

Table D.3: Regression table: Health (0-2 years)

	(1) OLS: General health	(2) IV: General health	(3) OLS: Chronic diseases	(4) IV: Chronic diseases
Grandparental care	0.0255 (0.0479)	0.373 (0.289)	-0.0350* (0.0157)	-0.0107 (0.0916)
No/lower school degree	-0.242* (0.111)	-0.135 (0.139)	-0.117** (0.0432)	-0.114* (0.0493)
University degree	-0.0584 (0.0602)	-0.0543 (0.0586)	-0.00816 (0.0198)	-0.00776 (0.0198)
Mother working part-time	-0.00771 (0.0530)	-0.0645 (0.0691)	-0.00994 (0.0175)	-0.0151 (0.0234)
Mother working full-time	-0.0768 (0.0763)	-0.115 (0.0764)	-0.0277 (0.0199)	-0.0308 (0.0226)
Father working part-time	-0.00390 (0.125)	-0.00704 (0.133)	0.160** (0.0562)	0.158** (0.0558)
Father working full-time	0.146+ (0.0869)	0.150+ (0.0858)	0.0538** (0.0197)	0.0539** (0.0202)
No father	0.503 (0.371)	0.502 (0.390)	0.0762 (0.0878)	0.0837 (0.0969)
Parents have mig.backgr.	-0.0756 (0.0677)	-0.0653 (0.0707)	0.0373 (0.0369)	0.0374 (0.0373)
log(income) in 1000â¬	-0.0922 (0.0613)	-0.0834 (0.0620)	-0.0122 (0.0166)	-0.0123 (0.0167)
Age mother	-0.00307 (0.00601)	-0.00206 (0.00656)	-0.00364+ (0.00212)	-0.00350+ (0.00203)
Emotional closeness with parents	-0.0467 (0.0293)	-0.0733* (0.0350)	-0.00741 (0.00903)	-0.00956 (0.0111)
Generated sex child	-0.0564 (0.0503)	-0.0522 (0.0517)	0.00401 (0.0164)	0.00405 (0.0165)
Age child (in months)	0.00215 (0.00210)	0.000544 (0.00262)	0.00203** (0.000781)	0.00193* (0.000861)
Number of children in household	-0.00435 (0.0519)	-0.00308 (0.0523)	0.00473 (0.0167)	0.00493 (0.0165)
Info on partner available	-0.293 (0.342)	-0.217 (0.342)	-0.0537 (0.0510)	-0.0519 (0.0528)
Parenting goals	-0.0573* (0.0236)	-0.0596* (0.0240)	0.00328 (0.00725)	0.00274 (0.00730)
At least one parent sick	0.163*** (0.0475)	0.163*** (0.0477)	0.00831 (0.0168)	0.00872 (0.0170)
At least one parent obese	-0.0367 (0.0634)	-0.0318 (0.0639)	-0.00276 (0.0235)	-0.00170 (0.0232)
Pregnant	-0.0777 (0.0693)	-0.0940 (0.0734)	-0.0352 (0.0262)	-0.0373 (0.0262)
Widowhood	0.255 (0.344)	0.157 (0.351)	0.0319 (0.0502)	0.0282 (0.0518)
Cohabitation with partner	0.118 (0.138)	0.152 (0.146)	-0.00896 (0.0671)	-0.00342 (0.0703)
At least on parent is single child	0.00246 (0.0767)	-0.0229 (0.0806)	0.000945 (0.0247)	0.0000126 (0.0249)
No school degree (grandmother)	0.0936 (0.167)	0.0821 (0.185)	-0.0203 (0.0640)	-0.0127 (0.0731)
Upper school degree (grandmother)	0.0432 (0.0821)	0.0593 (0.0812)	0.0199 (0.0256)	0.0218 (0.0257)
No school degree (grandfather)	-0.0580 (0.140)	0.0183 (0.156)	0.102 (0.0819)	0.114 (0.0895)
Upper school degree (grandfather)	-0.156* (0.0765)	-0.151* (0.0744)	-0.0413+ (0.0239)	-0.0429+ (0.0242)
Child visits kindergarden	0.166** (0.0538)	0.214** (0.0665)	-0.00300 (0.0179)	0.000148 (0.0235)
Birth order	0.0917+ (0.0496)	0.0999* (0.0508)	0.0169 (0.0151)	0.0169 (0.0150)
3 2010/11			0.0215 (0.0150)	0.0205 (0.0155)
Constant	1.646*** (0.378)	1.514*** (0.399)	0.0261 (0.127)	0.0232 (0.130)
Observations	1930	1910	2375	2345

Note: Robust standard errors clustered at the household level in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The general health problems variable is an ordinal variable on a scale from 1 (good health) to 5 (bad health). The chronic diseases variable is a binary variable which equals 1 for children with a chronic disease and 0 otherwise. The regressions include the control variables listed in table B.1 column (a) in the appendix. *Source:* Pairfam (2009-2019), weighted, own calculation.

Table D.4: Regression table: Health (3-5.5 years)

	(1)	(2)	(3)	(4)
	OLS:General health	IV:General health	OLS: Chronic diseases	IV: Chronic diseases
Grandparental care	0.0126 (0.0407)	0.298 (0.186)	-0.0419* (0.0169)	-0.0611 (0.0849)
No/lower school degree	-0.0945 (0.159)	-0.126 (0.158)	-0.0838+ (0.0431)	-0.0765 (0.0485)
University degree	-0.0714 (0.0470)	-0.0724 (0.0485)	-0.00986 (0.0203)	-0.00986 (0.0202)
Mother working part-time	-0.00416 (0.0455)	-0.0341 (0.0510)	0.00404 (0.0175)	0.00418 (0.0206)
Mother working full-time	-0.0176 (0.0547)	-0.0388 (0.0550)	-0.0544* (0.0217)	-0.0542* (0.0236)
Father working part-time	0.0564 (0.136)	0.0328 (0.136)	0.0399 (0.0611)	0.0392 (0.0610)
Father working full-time	0.0744 (0.0858)	0.0489 (0.0853)	-0.0203 (0.0369)	-0.0192 (0.0376)
No father	-0.334 (0.546)	-0.510 (0.559)	0.0692 (0.128)	0.0786 (0.135)
Parents have mig.backgr.	0.143* (0.0625)	0.133* (0.0648)	0.0545 (0.0339)	0.0547 (0.0342)
log(income) in 1000â¬	-0.0937+ (0.0553)	-0.0893 (0.0574)	-0.0142 (0.0223)	-0.0133 (0.0224)
Age mother	-0.00256 (0.00451)	-0.00240 (0.00459)	-0.00370+ (0.00207)	-0.00374+ (0.00208)
Emotional closeness with parents	-0.0566* (0.0222)	-0.0698** (0.0244)	-0.0100 (0.00928)	-0.00972 (0.00994)
Generated sex child	-0.0886* (0.0347)	-0.0803* (0.0356)	-0.0304+ (0.0161)	-0.0309+ (0.0165)
Age child (in months)	0.000708 (0.00142)	0.00110 (0.00145)	0.00220*** (0.000562)	0.00212*** (0.000587)
Number of children in household	0.0212 (0.0365)	0.0231 (0.0356)	-0.00875 (0.0143)	-0.00918 (0.0142)
Info on partner available	0.247 (0.498)	0.326 (0.496)	-0.0909 (0.0754)	-0.102 (0.0776)
Parenting goals	-0.0444* (0.0180)	-0.0449* (0.0182)	0.00158 (0.00842)	0.00154 (0.00845)
At least one parent sick	0.127** (0.0447)	0.130** (0.0444)	0.0345+ (0.0188)	0.0337+ (0.0188)
At least one parent obese	-0.0472 (0.0416)	-0.0387 (0.0418)	0.0250 (0.0225)	0.0252 (0.0227)
Pregnant	-0.0751 (0.0703)	-0.0539 (0.0738)	0.0526 (0.0349)	0.0468 (0.0354)
Widowhood	-0.286 (0.497)	-0.366 (0.495)	0.0585 (0.0753)	0.0686 (0.0776)
Cohabitation with partner	-0.120 (0.157)	-0.130 (0.163)	-0.0185 (0.0854)	-0.0245 (0.0879)
At least on parent is single child	0.0301 (0.0602)	0.0274 (0.0605)	0.0182 (0.0275)	0.0185 (0.0276)
No school degree (grandmother)	0.0616 (0.129)	-0.0466 (0.125)	0.0520 (0.0566)	0.0553 (0.0599)
Upper school degree (grandmother)	-0.0975 (0.0642)	-0.0957 (0.0636)	-0.0102 (0.0300)	-0.0110 (0.0310)
No school degree (grandfather)	-0.0534 (0.126)	0.0532 (0.124)	-0.0581 (0.0622)	-0.0538 (0.0654)
Upper school degree (grandfather)	-0.126* (0.0546)	-0.122* (0.0549)	-0.00821 (0.0278)	-0.00853 (0.0277)
Child visits kindergarden	0.0737 (0.0651)	0.0937 (0.0646)	0.0316 (0.0266)	0.0355 (0.0268)
Birth order	0.0259 (0.0319)	0.0348 (0.0318)	0.0141 (0.0116)	0.0141 (0.0119)
3 2010/11			-0.0217 (0.0166)	-0.0219 (0.0167)
Constant	2.182*** (0.332)	2.088*** (0.350)	0.214 (0.157)	0.226 (0.160)
Observations	3142	3118	3746	3709

Note: Robust standard errors clustered at the household level in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The general health problems variable is an ordinal variable on a scale from 1 (good health) to 5 (bad health). The chronic diseases variable is a binary variable which equals 1 for children with a chronic disease and 0 otherwise. The regressions include the control variables listed in table B.1 column (a) in the appendix.
Source: Pairfam (2009-2019), weighted, own calculation.

Table D.5: Regression table: Health (5.5-10 years)

	(1)	(2)	(3)	(4)
	OLS:General health	IV:General health	OLS: Chronic diseases	IV: Chronic diseases
Grandparental care	0.0611 ⁺ (0.0339)	0.277 ⁺ (0.151)	-0.0188 (0.0177)	-0.0651 (0.0825)
No/lower school degree	-0.119 (0.133)	-0.122 (0.131)	-0.0452 (0.0575)	-0.0249 (0.0613)
University degree	-0.0291 (0.0429)	-0.0359 (0.0429)	-0.0322 (0.0228)	-0.0281 (0.0230)
Mother working part-time	0.00854 (0.0423)	-0.0129 (0.0462)	-0.0112 (0.0213)	-0.00358 (0.0225)
Mother working full-time	0.0290 (0.0516)	0.0152 (0.0531)	-0.0242 (0.0262)	-0.0161 (0.0278)
No mother	-0.616* (0.264)	-0.800** (0.293)	-0.519*** (0.151)	-0.493** (0.154)
Father working part-time	-0.0119 (0.0925)	-0.0353 (0.0953)	0.0316 (0.0665)	0.0465 (0.0656)
Father working full-time	0.0245 (0.0796)	0.00716 (0.0813)	-0.00115 (0.0407)	0.00923 (0.0408)
No father	0.130 (0.309)	0.0526 (0.318)	-0.0383 (0.169)	-0.0278 (0.166)
Parents have mig.backgr.	0.00514 (0.0563)	-0.000128 (0.0545)	0.0329 (0.0394)	0.0334 (0.0394)
log(income) in 1000â¬	-0.161*** (0.0475)	-0.165*** (0.0485)	-0.00778 (0.0228)	-0.00674 (0.0230)
Age mother	-0.00837 ⁺ (0.00452)	-0.00729 (0.00463)	-0.000887 (0.00251)	-0.00128 (0.00245)
Emotional closeness with parents	-0.0543** (0.0177)	-0.0660** (0.0202)	-0.0176 ⁺ (0.00953)	-0.0148 (0.0108)
Generated sex child	-0.0940*** (0.0283)	-0.0905** (0.0285)	-0.0248 (0.0164)	-0.0259 (0.0163)
Age child (in months)	0.000807 (0.000814)	0.000994 (0.000821)	0.000603 (0.000413)	0.000573 (0.000423)
Number of children in household	0.00837 (0.0240)	0.0128 (0.0244)	-0.0117 (0.0141)	-0.0120 (0.0139)
Info on partner available	0.0104 (0.186)	0.0281 (0.190)	-0.180* (0.0788)	-0.188* (0.0779)
Parenting goals	-0.0659*** (0.0167)	-0.0623*** (0.0169)	-0.00615 (0.00961)	-0.00543 (0.00949)
At least one parent sick	0.147*** (0.0383)	0.155*** (0.0380)	0.0275 (0.0170)	0.0276 (0.0169)
At least one parent obese	-0.0409 (0.0394)	-0.0355 (0.0388)	0.0250 (0.0269)	0.0216 (0.0266)
Pregnant	0.0138 (0.0815)	0.0302 (0.0797)	0.0149 (0.0442)	0.0142 (0.0444)
Widowhood	-0.0707 (0.184)	-0.0904 (0.188)	0.152 ⁺ (0.0779)	0.159* (0.0770)
Cohabitation with partner	0.104 (0.232)	0.0796 (0.239)	-0.203 (0.146)	-0.214 (0.146)
At least on parent is single child	-0.0185 (0.0534)	-0.0299 (0.0557)	0.0204 (0.0327)	0.0233 (0.0329)
No school degree (grandmother)	0.233 ⁺ (0.122)	0.153 (0.117)	0.000145 (0.0598)	-0.00186 (0.0608)
Upper school degree (grandmother)	-0.114* (0.0546)	-0.108* (0.0538)	-0.0564 ⁺ (0.0314)	-0.0605 ⁺ (0.0313)
No school degree (grandfather)	-0.124 (0.151)	-0.0405 (0.147)	-0.0783 (0.0598)	-0.0736 (0.0621)
Upper school degree (grandfather)	-0.0494 (0.0498)	-0.0475 (0.0496)	0.0131 (0.0310)	0.0153 (0.0308)
Birth order	0.0383 (0.0238)	0.0437 ⁺ (0.0235)	0.00709 (0.0107)	0.00730 (0.0107)
3 2010/11			-0.00810 (0.0159)	-0.00337 (0.0159)
Constant	2.433*** (0.378)	2.310*** (0.400)	0.494* (0.214)	0.502* (0.214)
Observations	5304	5262	5973	5926

Note: Robust standard errors clustered at the household level in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The general health problems variable is an ordinal variable on a scale from 1 (good health) to 5 (bad health). The chronic diseases variable is a binary variable which equals 1 for children with a chronic disease and 0 otherwise. The regressions include the control variables listed in table B.1 column (a) in the appendix. *Source:* Pairfam (2009-2019), weighted, own calculation.

Table D.6: Regression table: Health (0-10 years)

	(1)	(2)	(3)	(4)
	OLS:General health problems	IV:General health problems	OLS: Chronic diseases	IV: Chronic diseases
Grandparental care	0.0389 (0.0263)	0.331* (0.144)	-0.0200 (0.0130)	-0.0343 (0.0680)
No/lower school degree	-0.167+ (0.0996)	-0.149 (0.101)	-0.0723+ (0.0383)	-0.0592 (0.0428)
University degree	-0.0417 (0.0340)	-0.0457 (0.0340)	-0.0223 (0.0175)	-0.0213 (0.0174)
Mother working part-time	0.00952 (0.0305)	-0.0232 (0.0359)	-0.00746 (0.0148)	-0.00544 (0.0168)
Mother working full-time	0.0102 (0.0389)	-0.0113 (0.0406)	-0.0355+ (0.0184)	-0.0328 (0.0202)
No mother	-0.736*** (0.161)	-0.981*** (0.198)	-0.374*** (0.0904)	-0.372*** (0.103)
Father working part-time	0.0167 (0.0779)	-0.00590 (0.0824)	0.0543 (0.0509)	0.0608 (0.0513)
Father working full-time	0.0416 (0.0584)	0.0263 (0.0594)	0.00398 (0.0283)	0.00955 (0.0287)
No father	-0.0207 (0.212)	-0.104 (0.226)	0.0709 (0.0979)	0.0769 (0.0997)
Parents have mig.backgr.	0.0378 (0.0431)	0.0337 (0.0424)	0.0419 (0.0293)	0.0418 (0.0296)
log(income) in 1000â¬	-0.116** (0.0377)	-0.114** (0.0388)	-0.00598 (0.0177)	-0.00502 (0.0180)
Age mother	-0.00575 (0.00371)	-0.00495 (0.00386)	-0.00267 (0.00184)	-0.00276 (0.00181)
Emotional closeness with parents	-0.0481** (0.0150)	-0.0640*** (0.0172)	-0.0122+ (0.00734)	-0.0113 (0.00825)
Generated sex child	-0.0852*** (0.0234)	-0.0802*** (0.0240)	-0.0227* (0.0112)	-0.0232* (0.0112)
Age child (in months)	0.00105* (0.000468)	0.00129** (0.000483)	0.00138*** (0.000200)	0.00137*** (0.000205)
Number of children in household	0.0147 (0.0219)	0.0181 (0.0219)	-0.00915 (0.0111)	-0.00893 (0.0110)
Info on partner available	0.0901 (0.163)	0.130 (0.169)	-0.122* (0.0562)	-0.128* (0.0571)
Parenting goals	-0.0566*** (0.0139)	-0.0550*** (0.0141)	-0.00270 (0.00684)	-0.00255 (0.00683)
At least one parent sick	0.146*** (0.0292)	0.152*** (0.0294)	0.0277* (0.0129)	0.0280* (0.0131)
At least one parent obese	-0.0353 (0.0336)	-0.0281 (0.0333)	0.0225 (0.0196)	0.0213 (0.0196)
Pregnant	-0.0509 (0.0428)	-0.0407 (0.0438)	0.00652 (0.0273)	0.00353 (0.0278)
Widowhood	-0.136 (0.161)	-0.178 (0.168)	0.0898 (0.0561)	0.0949+ (0.0569)
Cohabitation with partner	0.0367 (0.120)	0.0293 (0.128)	-0.0541 (0.0774)	-0.0604 (0.0808)
At least on parent is single child	-0.00454 (0.0467)	-0.0160 (0.0484)	0.0178 (0.0248)	0.0185 (0.0251)
No school degree (grandmother)	0.140 (0.0982)	0.0629 (0.0949)	0.0127 (0.0465)	0.0152 (0.0489)
Upper school degree (grandmother)	-0.0888+ (0.0503)	-0.0818+ (0.0495)	-0.0330 (0.0248)	-0.0343 (0.0248)
No school degree (grandfather)	-0.0748 (0.102)	0.00387 (0.0991)	-0.0470 (0.0520)	-0.0432 (0.0545)
Upper school degree (grandfather)	-0.0771+ (0.0440)	-0.0735+ (0.0440)	0.00559 (0.0238)	0.00611 (0.0238)
Birth order	0.0387+ (0.0208)	0.0468* (0.0208)	0.0133+ (0.00776)	0.0134+ (0.00794)
Child visits kindergarden	0.0599*** (0.0180)	0.0647*** (0.0188)	0.0181* (0.00756)	0.0179* (0.00762)
3 2010/11			-0.00802 (0.00943)	-0.00690 (0.00959)
Constant	2.215*** (0.259)	2.098*** (0.282)	0.257+ (0.132)	0.258+ (0.136)
Observations	11485	11391	13268	13144

Note: Robust standard errors clustered at the household level in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The general health problems variable is an ordinal variable on a scale from 1 (good health) to 5 (bad health). The chronic diseases variable is a binary variable which equals 1 for children with a chronic disease and 0 otherwise. The regressions include the control variables listed in table B.1 column (a) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

D.2 Socio-emotional problems

Table D.7: Regression table: Socio-emotional problems (3-5 years)

	(1) OLS:Socio-emotional problems	(2) IV:Socio-emotional problems	(3) OLS:Conduct	(4) IV:Conduct	(5) OLS:Hyperactivity	(6) IV:Hyperactivity	(7) OLS:Emotional	(8) IV:Emotional
Grandparental care	-0.332** (0.118)	1.332+ (0.762)	-0.0319 (0.0618)	0.237 (0.371)	-0.170** (0.0561)	0.546 (0.348)	-0.132** (0.0492)	0.544+ (0.294)
No/lower school degree	0.266 (0.397)	0.665 (0.426)	-0.00618 (0.155)	0.105 (0.164)	0.118 (0.176)	0.280 (0.190)	0.136 (0.191)	0.250 (0.198)
University degree	0.112 (0.152)	0.110 (0.176)	0.241*** (0.0675)	0.240*** (0.0702)	0.00519 (0.0697)	0.00437 (0.0757)	-0.135* (0.0608)	-0.135+ (0.0693)
Mother working part-time	-0.0187 (0.144)	-0.186 (0.163)	0.0967 (0.0672)	0.0651 (0.0754)	-0.0717 (0.0657)	-0.143+ (0.0765)	-0.0427 (0.0642)	-0.107 (0.0706)
Mother working full-time	0.00134 (0.173)	-0.106 (0.192)	-0.0126 (0.0863)	-0.0344 (0.0884)	-0.0932 (0.0782)	-0.138 (0.0883)	0.110 (0.0766)	0.0706 (0.0818)
Father working part-time	-0.363 (0.272)	-0.391 (0.304)	0.0360 (0.153)	-0.00489 (0.148)	-0.279+ (0.145)	-0.272+ (0.157)	-0.122 (0.127)	-0.118 (0.135)
Father working full-time	0.232 (0.244)	0.0964 (0.260)	0.125 (0.119)	0.0721 (0.117)	0.0634 (0.126)	0.0238 (0.130)	0.0409 (0.104)	-0.00322 (0.110)
No father	-2.506* (1.060)	-2.899* (1.128)	-1.047* (0.423)	-1.126** (0.409)	-0.436 (0.623)	-0.599 (0.641)	-1.028* (0.416)	-1.180* (0.486)
Parents have mig.backgr.	-0.200 (0.298)	-0.262 (0.322)	-0.136 (0.115)	-0.156 (0.116)	-0.0497 (0.143)	-0.0732 (0.152)	-0.0139 (0.0981)	-0.0314 (0.109)
log(income) in 1000â¬	-0.260 (0.161)	-0.250 (0.177)	-0.0582 (0.0780)	-0.0536 (0.0795)	-0.138+ (0.0756)	-0.133+ (0.0806)	-0.0633 (0.0618)	-0.0634 (0.0661)
Age mother	-0.0365* (0.0161)	-0.0270 (0.0177)	-0.00924 (0.00763)	-0.00725 (0.00789)	-0.0133+ (0.00747)	-0.00947 (0.00851)	-0.0141* (0.00656)	-0.0105 (0.00712)
Emotional closeness with parents	-0.0680 (0.0774)	-0.162 (0.1000)	-0.0597 (0.0371)	-0.0732+ (0.0427)	-0.0155 (0.0363)	-0.0555 (0.0460)	0.00792 (0.0309)	-0.0319 (0.0374)
Generated sex child	-0.0956 (0.132)	-0.00695 (0.132)	-0.0939 (0.0633)	-0.0763 (0.0688)	0.0271 (0.0620)	0.0649 (0.0713)	-0.0295 (0.0496)	0.00330 (0.0551)
Age child (in months)	0.00547 (0.00512)	0.00763 (0.00563)	-0.00858*** (0.00233)	-0.00796*** (0.00237)	0.00433+ (0.00228)	0.00506* (0.00251)	0.00970*** (0.00234)	0.0105*** (0.00243)
Number of children in household	-0.0355 (0.125)	-0.0186 (0.132)	-0.00725 (0.0565)	-0.00446 (0.0562)	-0.0421 (0.0581)	-0.0348 (0.0614)	0.0135 (0.0474)	0.0203 (0.0509)
Info on partner available	0.648 (0.635)	0.852 (0.591)	0.398 (0.285)	0.427 (0.275)	-0.126 (0.502)	-0.0316 (0.479)	0.376+ (0.228)	0.457+ (0.253)
11 2018/19	-0.162 (0.224)	-0.285 (0.260)	0.00919 (0.114)	-0.00624 (0.120)	-0.0782 (0.108)	-0.136 (0.123)	-0.0941 (0.0988)	-0.144 (0.113)
Health of child	-0.231* (0.0912)	-0.214* (0.0943)	-0.0285 (0.0422)	-0.0267 (0.0422)	-0.0813+ (0.0431)	-0.0715 (0.0446)	-0.120** (0.0375)	-0.115** (0.0395)
Satisfaction child care	-0.0472 (0.0351)	-0.0624 (0.0395)	-0.0248 (0.0154)	-0.0285+ (0.0157)	-0.00977 (0.0163)	-0.0156 (0.0183)	-0.0128 (0.0147)	-0.0184 (0.0161)
At least one parent religious	-0.144 (0.182)	-0.313 (0.211)	-0.0263 (0.0806)	-0.0567 (0.0888)	-0.108 (0.0843)	-0.181+ (0.0980)	-0.00870 (0.0724)	-0.0745 (0.0836)
At least one parent sick	0.253+ (0.133)	0.305* (0.138)	0.106 (0.0645)	0.118+ (0.0642)	0.111+ (0.0635)	0.133* (0.0651)	0.0375 (0.0549)	0.0561 (0.0562)
At least one parent obese	0.0889 (0.158)	0.0895 (0.166)	-0.0457 (0.0664)	-0.0443 (0.0675)	0.0458 (0.0789)	0.0463 (0.0799)	0.0864 (0.0606)	0.0840 (0.0619)
Pregnant	0.172 (0.233)	0.329 (0.270)	-0.0106 (0.130)	0.0157 (0.134)	0.0452 (0.115)	0.111 (0.133)	0.140 (0.122)	0.205 (0.134)
Cohabitation with partner	-1.258 (0.843)	-0.662 (0.985)	-0.535+ (0.323)	-0.418 (0.332)	-0.228 (0.335)	0.0183 (0.412)	-0.498 (0.328)	-0.268 (0.399)
Widowhood	-0.820 (0.637)	-1.091+ (0.598)	-0.559* (0.284)	-0.603* (0.277)	0.104 (0.503)	-0.0173 (0.481)	-0.365 (0.224)	-0.470+ (0.252)
At least on parent is single child	0.0568 (0.202)	-0.0190 (0.205)	0.0883 (0.111)	0.0735 (0.110)	0.000459 (0.0852)	-0.0311 (0.0874)	-0.0319 (0.0761)	-0.0613 (0.0795)
No school degree (grandmother)	0.568 (0.450)	0.496 (0.466)	0.103 (0.176)	0.117 (0.184)	0.141 (0.211)	0.0964 (0.213)	0.327+ (0.172)	0.287 (0.177)
Upper school degree (grandmother)	0.304 (0.194)	0.275 (0.208)	0.318*** (0.0922)	0.315*** (0.0919)	0.101 (0.0803)	0.0887 (0.0879)	-0.115 (0.0780)	-0.129 (0.0841)
No school degree (grandfather)	0.303 (0.803)	0.656 (0.891)	0.260 (0.348)	0.415 (0.375)	0.251 (0.285)	0.398 (0.308)	-0.206 (0.275)	-0.158 (0.299)
Upper school degree (grandfather)	-0.188 (0.188)	-0.173 (0.201)	-0.120 (0.0855)	-0.113 (0.0862)	-0.127 (0.0815)	-0.124 (0.0853)	0.0594 (0.0724)	0.0643 (0.0775)
Child visits kindergarden	0.0988 (0.290)	0.100 (0.299)	0.0710 (0.112)	0.0718 (0.114)	0.0329 (0.154)	0.0337 (0.155)	-0.00555 (0.124)	-0.00576 (0.123)
Birth order	-0.228+ (0.119)	-0.175 (0.130)	-0.0183 (0.0563)	-0.00882 (0.0581)	-0.0686 (0.0519)	-0.0446 (0.0568)	-0.140** (0.0428)	-0.119* (0.0473)
Temperament	-0.387*** (0.0316)	-0.389*** (0.0328)	-0.185*** (0.0149)	-0.187*** (0.0148)	-0.109*** (0.0144)	-0.110*** (0.0148)	-0.0928*** (0.0135)	-0.0930*** (0.0138)
Constant	15.07*** (1.426)	13.91*** (1.571)	5.905*** (0.608)	5.676*** (0.639)	4.709*** (0.577)	4.200*** (0.675)	4.459*** (0.596)	4.048*** (0.666)
Observations	2214	2203	2215	2204	2217	2206	2215	2204

Note: Robust standard errors clustered at the household level in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables conduct problems, hyperactivity and emotional problems are ordinal variables on a scale from 0 (does not apply) to 5 (fully applies). The outcome variable socio-emotional problems is constructed summing up the three other indices, resulting in a variable that ranges from 0 (does not apply) to 12 (fully applies). The regressions include the control variables listed in table B.1 column (b) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

E Parental outcomes in detail

E.1 Satisfaction with childcare

Table E.8: Regression table: Mothers' satisfaction with childcare

	(1) OLS: Age 0-2	(2) IV: Age 0-2	(3) OLS: Age 3-5.5	(4) IV: Age 3-5.5	(5) OLS: Age 5.5-10	(6) IV: Age 5.5-10	(7) OLS: all	(8) IV: all
Grandparental care	0.0280 (0.240)	1.971+ (1.086)	0.195 (0.154)	1.541+ (0.902)	0.0609 (0.111)	0.779 (0.561)	0.0776 (0.102)	1.155* (0.557)
No/lower school degree	-0.275 (0.409)	-0.0835 (0.418)	-0.186 (0.252)	-0.0869 (0.256)	-0.488* (0.218)	-0.456* (0.229)	-0.294+ (0.157)	-0.214 (0.167)
University degree	0.243 (0.271)	0.345 (0.290)	-0.278+ (0.165)	-0.203 (0.179)	-0.0234 (0.143)	0.0260 (0.148)	-0.0600 (0.121)	0.00986 (0.130)
Mother working part-time	-0.356 (0.241)	-0.448+ (0.254)	-0.0187 (0.160)	-0.166 (0.174)	-0.0924 (0.153)	-0.164 (0.153)	-0.116 (0.116)	-0.211+ (0.122)
Mother working full-time	-0.758* (0.341)	-0.693+ (0.367)	-0.171 (0.209)	-0.269 (0.232)	-0.305 (0.198)	-0.372+ (0.198)	-0.331* (0.151)	-0.393* (0.165)
Father working part-time	-0.904 (0.695)	-0.891 (0.698)	-0.175 (0.419)	-0.182 (0.462)	-0.882** (0.330)	-0.856* (0.340)	-0.867** (0.297)	-0.872** (0.321)
Father working full-time	-0.458 (0.374)	-0.448 (0.412)	-0.192 (0.270)	-0.254 (0.285)	-0.430+ (0.246)	-0.391 (0.248)	-0.360+ (0.186)	-0.349+ (0.197)
No father	1.203 (0.980)	1.072 (1.005)	-0.160 (0.676)	-0.687 (0.733)	-0.270 (0.758)	-0.141 (0.809)	-0.118 (0.509)	-0.181 (0.545)
Migrational background	0.221 (0.321)	0.316 (0.323)	-0.335 (0.259)	-0.367 (0.264)	-0.102 (0.227)	-0.164 (0.219)	-0.146 (0.168)	-0.175 (0.173)
log(income) in 1000â¬	0.217 (0.315)	0.134 (0.354)	0.321+ (0.182)	0.264 (0.192)	0.382* (0.166)	0.339+ (0.176)	0.352** (0.122)	0.290* (0.134)
Age mother	-0.0204 (0.0227)	-0.0182 (0.0241)	-0.0123 (0.0185)	-0.00226 (0.0194)	-0.0218 (0.0159)	-0.0191 (0.0163)	-0.0177 (0.0120)	-0.0116 (0.0131)
Emotional closeness with parents	0.217+ (0.114)	0.0490 (0.140)	0.195* (0.0784)	0.139+ (0.0838)	0.175** (0.0668)	0.133+ (0.0711)	0.178*** (0.0536)	0.120* (0.0586)
Generated sex child	0.0709 (0.220)	0.0706 (0.227)	0.159 (0.127)	0.157 (0.129)	0.0584 (0.104)	0.0280 (0.107)	0.0941 (0.0809)	0.0743 (0.0840)
Age child (in months)	-0.0177 (0.0115)	-0.0294* (0.0138)	0.00751 (0.00590)	0.00694 (0.00595)	0.00207 (0.00281)	0.00254 (0.00279)	0.00124 (0.00165)	0.00182 (0.00178)
Number of children in household	-0.0587 (0.305)	0.188 (0.304)	0.253+ (0.129)	0.284* (0.135)	0.0824 (0.0937)	0.113 (0.0955)	0.146+ (0.0765)	0.187* (0.0789)
Health	0.0803 (0.124)	0.0611 (0.123)	0.198** (0.0676)	0.187** (0.0705)	0.136* (0.0545)	0.128* (0.0539)	0.155*** (0.0453)	0.142** (0.0472)
Obesity	0.184 (0.255)	0.142 (0.255)	0.0501 (0.216)	0.0963 (0.222)	0.389** (0.125)	0.405** (0.126)	0.294* (0.114)	0.339** (0.124)
Pregnant	0.520 (0.462)	0.674 (0.549)	0.263 (0.220)	0.291 (0.239)	0.415 (0.315)	0.372 (0.300)	0.301+ (0.165)	0.328+ (0.177)
Cohabitation with partner	0.981 (0.689)	1.050 (0.710)	0.672 (0.546)	0.571 (0.564)	0.267 (0.711)	0.394 (0.767)	0.529 (0.467)	0.563 (0.499)
Widowhood	0.122 (0.201)	-0.000487 (0.233)	-0.103 (0.137)	-0.182 (0.159)	-0.0740 (0.115)	-0.0967 (0.114)	-0.0537 (0.0928)	-0.0926 (0.0983)
Single child	-0.199 (0.316)	-0.460 (0.361)	-0.130 (0.263)	-0.192 (0.283)	-0.0196 (0.190)	-0.0836 (0.196)	-0.0588 (0.162)	-0.143 (0.181)
No school degree (grandmother)	-1.010 (0.822)	-1.335 (0.965)	-0.462 (0.380)	-0.380 (0.398)	0.264 (0.229)	0.246 (0.219)	-0.0609 (0.244)	-0.115 (0.282)
Upper school degree (grandmother)	0.360 (0.301)	0.277 (0.311)	0.237 (0.256)	0.306 (0.263)	-0.232 (0.213)	-0.173 (0.210)	-0.00465 (0.173)	0.0465 (0.175)
No school degree (grandfather)	0.331 (0.670)	0.819 (0.777)	1.125* (0.499)	1.147* (0.545)	-0.0429 (0.328)	0.0585 (0.300)	0.330 (0.285)	0.405 (0.305)
Upper school degree (grandfather)	0.00143 (0.316)	0.0879 (0.301)	-0.214 (0.224)	-0.296 (0.221)	-0.0407 (0.180)	-0.0805 (0.181)	-0.0734 (0.155)	-0.113 (0.154)
Child visits kindergarden	0.161 (0.235)	0.405 (0.300)	0.295 (0.300)	0.274 (0.295)			0.00124 (0.0687)	0.0276 (0.0690)
Birth order	0.237 (0.277)	0.100 (0.268)	-0.0580 (0.118)	-0.0480 (0.124)	0.0747 (0.0872)	0.0796 (0.0872)	0.0298 (0.0657)	0.0372 (0.0686)
Health of child	0.0693 (0.131)	0.134 (0.120)	0.0169 (0.0941)	0.0446 (0.0931)	0.315*** (0.0898)	0.338*** (0.0899)	0.213*** (0.0649)	0.249*** (0.0637)
Constant	7.907*** (1.705)	6.223** (2.110)	5.719*** (1.105)	5.827*** (1.113)	6.994*** (1.035)	6.855*** (1.058)	6.657*** (0.752)	6.323*** (0.792)
Observations	801	791	1575	1563	2925	2901	5956	5905

Note: Robust standard errors clustered at the household level in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variable is an ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied) and measures the satisfaction with the child care situation for each child individually. The regressions include the control variables listed in table B.1 column (c) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.9: Regression table: Fathers' satisfaction with childcare

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS: Age 0-2	IV: Age 0-2	OLS: Age 3-5.5	IV: Age 3-5.5	OLS: Age 5.5-10	IV: Age 5.5-10	OLS: all	IV: all
Grandparental care	0.140 (0.233)	2.472 (1.634)	0.394* (0.171)	1.523* (0.760)	0.284* (0.128)	1.822** (0.679)	0.312** (0.118)	1.858** (0.639)
No/lower school degree	0.101 (0.628)	-0.347 (0.739)	-0.527 (0.732)	-0.596 (0.700)	0.106 (0.414)	0.0618 (0.419)	-0.144 (0.455)	-0.257 (0.448)
Upper Secondary/vocational degree	0.516* (0.252)	0.244 (0.363)	0.109 (0.178)	0.0953 (0.178)	0.0901 (0.145)	0.112 (0.148)	0.145 (0.134)	0.130 (0.136)
Mother working part-time	-0.526+ (0.287)	-0.870* (0.428)	-0.384* (0.175)	-0.519* (0.203)	-0.181 (0.164)	-0.263 (0.166)	-0.296* (0.133)	-0.447** (0.145)
Mother working full-time	-0.351 (0.288)	-0.555+ (0.330)	-0.251 (0.212)	-0.273 (0.221)	-0.0683 (0.171)	-0.105 (0.180)	-0.192 (0.147)	-0.262+ (0.156)
Father working part-time	0.0212 (0.469)	-0.188 (0.580)	-0.852+ (0.489)	-1.055* (0.489)	0.368 (0.428)	0.0133 (0.465)	-0.276 (0.356)	-0.547 (0.381)
Father working full-time	-0.529 (0.338)	-0.781+ (0.426)	-0.483 (0.336)	-0.609+ (0.333)	0.177 (0.376)	0.0483 (0.361)	-0.230 (0.256)	-0.384 (0.252)
Migrational background	-0.243 (0.540)	0.0181 (0.533)	-0.477 (0.318)	-0.483+ (0.285)	-0.176 (0.291)	-0.314 (0.274)	-0.274 (0.280)	-0.345 (0.258)
log(income) in 1000â¬	0.680** (0.239)	0.528+ (0.303)	0.303 (0.224)	0.224 (0.238)	0.252 (0.170)	0.168 (0.186)	0.286* (0.140)	0.206 (0.152)
Age father	-0.0637** (0.0240)	-0.0387 (0.0305)	-0.00644 (0.0212)	0.00391 (0.0217)	-0.0321 (0.0197)	-0.0220 (0.0214)	-0.0259 (0.0160)	-0.0135 (0.0169)
Emotional closeness with parents	0.346** (0.117)	0.176 (0.169)	0.172* (0.0870)	0.149 (0.100)	0.0504 (0.0726)	-0.0652 (0.109)	0.152* (0.0595)	0.0539 (0.0872)
Generated sex child	-0.229 (0.187)	-0.153 (0.192)	-0.0123 (0.134)	0.0646 (0.143)	0.219* (0.102)	0.239* (0.108)	0.0486 (0.0812)	0.0880 (0.0832)
Age child (in months)	-0.00871 (0.00933)	-0.0229+ (0.0122)	-0.00321 (0.00583)	-0.00219 (0.00612)	-0.000509 (0.00353)	0.00125 (0.00391)	-0.000433 (0.00166)	0.000118 (0.00171)
Number of children in household	0.110 (0.213)	0.128 (0.209)	0.297* (0.115)	0.292* (0.116)	0.154+ (0.0926)	0.223* (0.103)	0.183* (0.0744)	0.219** (0.0797)
Health	0.0783 (0.0882)	-0.0483 (0.132)	0.152+ (0.0825)	0.112 (0.0844)	0.112+ (0.0586)	0.0765 (0.0636)	0.142** (0.0497)	0.102+ (0.0525)
Obesity	-0.0483 (0.211)	0.135 (0.275)	-0.0625 (0.174)	0.0203 (0.192)	-0.178 (0.186)	-0.0507 (0.197)	-0.0603 (0.146)	0.0491 (0.159)
Pregnant	0.655* (0.311)	0.801* (0.349)	0.429+ (0.250)	0.483+ (0.257)	-0.208 (0.263)	-0.0320 (0.274)	0.166 (0.177)	0.252 (0.182)
Cohabitation with partner	1.780 (1.259)	2.531* (1.212)	0.944+ (0.560)	1.107* (0.556)	1.424 (1.602)	1.672 (1.396)	1.195 (0.915)	1.548+ (0.863)
Widowhood	0.373 (0.283)	0.428 (0.286)	0.0336 (0.148)	0.0398 (0.153)	0.00602 (0.133)	-0.00874 (0.140)	0.0973 (0.121)	0.117 (0.127)
Single child	-0.674+ (0.343)	-0.645+ (0.340)	-0.0469 (0.258)	-0.0646 (0.232)	-0.109 (0.218)	-0.0932 (0.196)	-0.0913 (0.176)	-0.0828 (0.153)
No school degree (grandmother)	0.408 (0.721)	0.0901 (0.656)	0.780 (0.572)	0.329 (0.572)	0.276 (0.637)	-0.387 (0.628)	0.557 (0.412)	0.105 (0.357)
Upper school degree (grandmother)	-0.168 (0.305)	-0.218 (0.302)	-0.250 (0.239)	-0.346 (0.245)	-0.309+ (0.180)	-0.343 (0.212)	-0.237 (0.173)	-0.306 (0.191)
No school degree (grandfather)	-0.828 (0.631)	-0.430 (0.762)	-0.641 (0.582)	0.0288 (0.559)	-0.217 (0.644)	0.435 (0.636)	-0.648 (0.429)	-0.146 (0.411)
Upper school degree (grandfather)	0.531+ (0.275)	0.268 (0.308)	0.438+ (0.224)	0.515* (0.215)	0.102 (0.173)	0.119 (0.187)	0.247 (0.154)	0.257 (0.158)
Child visits kindergarden	0.00535 (0.247)	0.308 (0.348)	-0.479* (0.225)	-0.462+ (0.238)			-0.254*** (0.0730)	-0.244*** (0.0735)
Birth order	0.163 (0.214)	0.183 (0.210)	0.0415 (0.124)	0.0635 (0.124)	0.0897 (0.0702)	0.118 (0.0727)	0.0794 (0.0601)	0.0996 (0.0609)
Health of child	0.423*** (0.110)	0.513*** (0.135)	0.168 (0.124)	0.172 (0.128)	0.463*** (0.0827)	0.513*** (0.0899)	0.363*** (0.0699)	0.397*** (0.0734)
No mother		0 (.)		0 (.)	2.861+ (1.581)	1.534 (1.484)	2.415** (0.919)	1.226 (1.061)
Constant	5.187** (1.955)	4.410* (2.196)	6.704*** (1.233)	6.101*** (1.260)	4.798* (2.185)	4.484* (2.041)	5.584*** (1.149)	5.143*** (1.194)
Observations	621	613	1139	1128	2010	1994	4216	4178

Note: Robust standard errors clustered at the household level in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variable is an ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied) and measures the satisfaction with the child care situation for each child individually. The regressions include the control variables listed in table B.1 column (c) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

E.2 Satisfaction Mother

Table E.10: Regression table: Mothers' satisfaction with life, education/career and leisure (Age: 0-2 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS:General sat.	IV:General sat.	OLS:Sat. educ./career	IV:Sat. educ./career	OLS:Sat. leisure	IV:Sat. leisure
Grandparental care	-0.0871 (0.0853)	0.120 (0.409)	0.0747 (0.119)	0.207 (0.517)	0.195 (0.134)	0.990 ⁺ (0.590)
No / lower school degree	0.0401 (0.171)	0.0515 (0.172)	-1.302*** (0.231)	-1.315*** (0.230)	0.00736 (0.216)	0.0261 (0.222)
University degree	0.000417 (0.0882)	-0.00356 (0.0868)	0.275* (0.125)	0.276* (0.124)	0.165 (0.133)	0.163 (0.133)
Working part-time	0.0300 (0.0958)	0.00296 (0.117)	0.696*** (0.150)	0.688*** (0.159)	-0.160 (0.155)	-0.257 (0.169)
Working full-time	0.0366 (0.132)	-0.00118 (0.151)	0.909*** (0.187)	0.919*** (0.197)	0.00308 (0.195)	-0.107 (0.207)
Partner working part-time	-0.138 (0.219)	-0.143 (0.227)	-0.805* (0.342)	-0.794* (0.345)	0.105 (0.354)	0.0237 (0.362)
Partner working full-time	-0.161 (0.141)	-0.156 (0.143)	-0.560** (0.210)	-0.540** (0.209)	-0.0865 (0.232)	-0.101 (0.233)
No partner	-0.111 (0.322)	-0.239 (0.343)	-0.351 (0.458)	-0.545 (0.492)	-0.138 (0.444)	-0.329 (0.490)
Migrational background	0.122 (0.115)	0.117 (0.120)	0.0316 (0.235)	0.0358 (0.234)	-0.211 (0.251)	-0.263 (0.254)
log(income) in 1000â−	0.402** (0.128)	0.333* (0.131)	0.699*** (0.146)	0.624*** (0.152)	0.155 (0.167)	0.0805 (0.178)
Age	-0.000634 (0.00917)	0.00333 (0.00989)	0.0133 (0.0130)	0.0170 (0.0136)	-0.00441 (0.0132)	0.00153 (0.0142)
Emotional closeness with parents	0.259*** (0.0522)	0.258*** (0.0504)	0.123+ (0.0693)	0.108 (0.0701)	0.234*** (0.0702)	0.206** (0.0763)
Children's sex	-0.156** (0.0559)	-0.159** (0.0565)	-0.0142 (0.0805)	-0.0219 (0.0799)	-0.197* (0.0894)	-0.176+ (0.0902)
Nr. children 0-2	0.145 (0.139)	0.164 (0.136)	0.159 (0.218)	0.171 (0.215)	-0.994*** (0.235)	-0.922*** (0.235)
Nr. children 3-5.5	-0.0770 (0.119)	-0.0725 (0.126)	0.0826 (0.180)	0.0946 (0.183)	-0.245 (0.183)	-0.279 (0.184)
Nr. children 5.5-10	0.00575 (0.0783)	0.0297 (0.0817)	-0.00365 (0.124)	0.0133 (0.126)	-0.314* (0.130)	-0.262+ (0.139)
Nr. other children	-0.0699 (0.105)	-0.0880 (0.104)	-0.0577 (0.141)	-0.0490 (0.140)	0.114 (0.148)	0.117 (0.147)
Health	0.452*** (0.0546)	0.453*** (0.0550)	0.294*** (0.0621)	0.288*** (0.0616)	0.399*** (0.0735)	0.417*** (0.0746)
Obesity	-0.109 (0.116)	-0.115 (0.119)	0.0466 (0.167)	0.0440 (0.166)	-0.132 (0.169)	-0.180 (0.172)
Pregnant	0.442** (0.155)	0.474** (0.155)	0.243 (0.193)	0.259 (0.195)	0.0526 (0.252)	0.114 (0.257)
Cohabitation with partner	0.159 (0.258)	0.190 (0.267)	-0.398 (0.328)	-0.318 (0.336)	0.167 (0.330)	0.0800 (0.337)
Widowed	0.416 (0.257)	0.452 (0.276)	-0.994+ (0.579)	-0.891 (0.575)	0.674+ (0.406)	0.691+ (0.381)
Single child	0.147 (0.115)	0.104 (0.137)	-0.0175 (0.175)	-0.0465 (0.197)	-0.123 (0.195)	-0.288 (0.218)
No school degree (grandm.)	0.0151 (0.224)	-0.157 (0.246)	-0.967* (0.416)	-1.167** (0.452)	-1.112** (0.342)	-1.253** (0.391)
Upper school degree (grandm.)	-0.00425 (0.130)	0.0111 (0.126)	-0.0650 (0.155)	-0.0672 (0.152)	-0.198 (0.185)	-0.186 (0.183)
No school degree (grandf.)	-0.211 (0.342)	-0.144 (0.374)	0.683 (0.474)	0.795 (0.507)	0.276 (0.385)	0.276 (0.407)
Upper school degree (grandf.)	-0.0338 (0.126)	-0.0370 (0.127)	-0.117 (0.150)	-0.101 (0.149)	-0.138 (0.171)	-0.118 (0.170)
Children j6 in Kita	-0.0257 (0.0859)	-0.0111 (0.0958)	-0.0294 (0.135)	-0.0410 (0.144)	-0.142 (0.133)	-0.0745 (0.148)
Age youngest child	-0.0209*** (0.00458)	-0.0223*** (0.00488)	-0.0163* (0.00760)	-0.0177* (0.00794)	0.00109 (0.00706)	-0.00225 (0.00779)
Children's mean health	0.0744 (0.0633)	0.0930 (0.0630)	0.0922 (0.0886)	0.105 (0.0862)	0.187+ (0.101)	0.180+ (0.101)
Constant	5.587*** (0.753)	5.212*** (0.781)	5.344*** (1.032)	5.026*** (1.025)	5.627*** (1.083)	5.189*** (1.102)
Observations	2052	2027	1971	1947	2052	2027

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.11: Regression table: Mothers' satisfaction with life, education/career and leisure (Age: 3-5.5 years)

	(1) OLS:General sat.	(2) IV:General sat.	(3) OLS:Sat. educ./career	(4) IV:Sat. educ./career	(5) OLS:Sat. leisure	(6) IV:Sat. leisure
Grandparental care	0.0623 (0.0828)	0.166 (0.349)	0.200 ⁺ (0.103)	-0.585 (0.475)	0.0124 (0.118)	0.146 (0.503)
No / lower school degree	-0.313 (0.197)	-0.324 ⁺ (0.197)	-1.585*** (0.225)	-1.649*** (0.233)	-0.452* (0.225)	-0.457* (0.225)
University degree	-0.0907 (0.0835)	-0.0982 (0.0829)	0.149 (0.110)	0.154 (0.108)	-0.0887 (0.119)	-0.0787 (0.119)
Working part-time	-0.180 ⁺ (0.100)	-0.188 ⁺ (0.106)	0.665*** (0.152)	0.776*** (0.158)	-0.264 ⁺ (0.143)	-0.292 ⁺ (0.150)
Working full-time	-0.125 (0.122)	-0.140 (0.128)	1.005*** (0.179)	1.149*** (0.194)	-0.329 ⁺ (0.171)	-0.365* (0.182)
Partner working part-time	0.117 (0.274)	0.102 (0.270)	-0.285 (0.331)	-0.265 (0.337)	-0.114 (0.354)	-0.130 (0.350)
Partner working full-time	0.239 (0.189)	0.227 (0.187)	-0.154 (0.222)	-0.193 (0.223)	0.140 (0.213)	0.135 (0.212)
No partner	0.0221 (0.370)	-0.0186 (0.379)	0.292 (0.397)	0.421 (0.426)	-0.0300 (0.375)	-0.183 (0.387)
Migrational background	0.202 ⁺ (0.109)	0.208 ⁺ (0.107)	-0.0264 (0.213)	0.0185 (0.207)	-0.314 (0.208)	-0.294 (0.208)
log(income) in 1000â¬	0.551*** (0.107)	0.541*** (0.110)	0.750*** (0.132)	0.771*** (0.134)	0.244 ⁺ (0.137)	0.216 (0.141)
Age	-0.00850 (0.00948)	-0.00682 (0.0103)	-0.00727 (0.0122)	-0.0141 (0.0137)	-0.0293* (0.0126)	-0.0268 ⁺ (0.0141)
Emotional closeness with parents	0.243*** (0.0472)	0.244*** (0.0469)	0.163** (0.0581)	0.179** (0.0583)	0.233*** (0.0621)	0.227*** (0.0643)
Children's sex	-0.107* (0.0488)	-0.110* (0.0488)	-0.00136 (0.0637)	-0.00195 (0.0641)	-0.184** (0.0713)	-0.187** (0.0707)
Nr. children 0-2	0.0117 (0.148)	0.00594 (0.148)	0.153 (0.216)	0.203 (0.215)	-0.546* (0.224)	-0.552* (0.224)
Nr. children 3-5.5	0.0722 (0.178)	0.0779 (0.176)	0.219 (0.220)	0.225 (0.219)	-0.0276 (0.229)	-0.0172 (0.226)
Nr. children 5.5-10	0.0402 (0.0624)	0.0480 (0.0641)	-0.0271 (0.0884)	-0.0517 (0.0909)	-0.158 ⁺ (0.0927)	-0.154 (0.0943)
Nr. other children	-0.0711 (0.0745)	-0.0699 (0.0757)	0.131 (0.0875)	0.117 (0.0892)	0.0150 (0.0894)	0.0172 (0.0891)
Health	0.393*** (0.0535)	0.392*** (0.0535)	0.276*** (0.0625)	0.276*** (0.0624)	0.354*** (0.0648)	0.360*** (0.0645)
Obesity	0.116 (0.118)	0.116 (0.116)	0.329* (0.144)	0.347* (0.145)	0.0654 (0.142)	0.0672 (0.141)
Pregnant	0.407** (0.135)	0.414** (0.135)	-0.00823 (0.250)	-0.00416 (0.250)	0.0498 (0.212)	0.0553 (0.210)
Cohabitation with partner	0.374 (0.263)	0.389 (0.280)	-0.0534 (0.288)	-0.0780 (0.315)	0.224 (0.275)	0.153 (0.288)
Widowed	0.0838 (0.287)	0.124 (0.306)	-0.0149 (0.639)	-0.202 (0.627)	-0.0453 (0.536)	-0.0344 (0.556)
Single child	0.0879 (0.114)	0.0683 (0.120)	-0.176 (0.184)	-0.107 (0.193)	0.0676 (0.167)	0.0230 (0.175)
No school degree (grandm.)	0.0706 (0.214)	0.0306 (0.232)	-0.654* (0.302)	-0.638 ⁺ (0.327)	-1.358*** (0.375)	-1.432*** (0.399)
Upper school degree (grandm.)	0.145 (0.0990)	0.153 (0.0983)	-0.351* (0.145)	-0.386** (0.147)	-0.0756 (0.159)	-0.0719 (0.160)
No school degree (grandf.)	-0.116 (0.375)	-0.0923 (0.378)	0.170 (0.432)	0.142 (0.425)	0.459 (0.391)	0.508 (0.398)
Upper school degree (grandf.)	-0.0713 (0.0893)	-0.0795 (0.0885)	0.0441 (0.127)	0.0551 (0.126)	-0.00614 (0.134)	-0.00746 (0.133)
Children j6 in Kita	-0.0575 (0.117)	-0.0590 (0.116)	-0.103 (0.168)	-0.135 (0.165)	-0.299* (0.141)	-0.302* (0.139)
Age youngest child	-0.000244 (0.00375)	-0.000551 (0.00371)	-0.00225 (0.00491)	-0.00251 (0.00490)	0.00615 (0.00499)	0.00611 (0.00495)
Children's mean health	0.156* (0.0660)	0.157* (0.0659)	0.164 ⁺ (0.0880)	0.150 ⁺ (0.0897)	0.248** (0.0883)	0.251** (0.0875)
Constant	4.306*** (0.706)	4.180*** (0.746)	4.293*** (0.880)	4.483*** (0.954)	4.041*** (1.033)	3.807*** (1.085)
Observations	2297	2275	2243	2221	2296	2274

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.12: Regression table: Mothers' satisfaction with life, education/career and leisure (Age: 5.5-10 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS:General sat.	IV:General sat.	OLS:Sat. educ./career	IV:Sat. educ./career	OLS:Sat. leisure	IV:Sat. leisure
Grandparental care	0.0389 (0.0715)	0.262 (0.336)	0.0411 (0.0934)	0.131 (0.422)	-0.125 (0.101)	1.236** (0.471)
No / lower school degree	-0.487** (0.158)	-0.456** (0.162)	-1.284*** (0.197)	-1.281*** (0.206)	-0.393* (0.181)	-0.316+ (0.186)
University degree	-0.105 (0.0722)	-0.100 (0.0740)	0.111 (0.0945)	0.117 (0.0974)	-0.282** (0.0986)	-0.203+ (0.104)
Working part-time	-0.00667 (0.0898)	-0.0299 (0.0910)	0.999*** (0.151)	0.999*** (0.152)	-0.0609 (0.123)	-0.180 (0.130)
Working full-time	-0.0380 (0.119)	-0.0821 (0.119)	1.289*** (0.177)	1.313*** (0.178)	-0.347* (0.153)	-0.440** (0.158)
Partner working part-time	-0.0414 (0.270)	-0.0687 (0.270)	-0.0554 (0.271)	-0.0539 (0.271)	-0.0197 (0.313)	0.0892 (0.304)
Partner working full-time	0.267 (0.172)	0.244 (0.172)	-0.0105 (0.184)	-0.00723 (0.183)	0.497* (0.198)	0.550** (0.196)
No partner	0.171 (0.269)	0.153 (0.272)	-0.372 (0.336)	-0.457 (0.340)	0.389 (0.289)	0.340 (0.295)
Migrational background	0.0821 (0.126)	0.0593 (0.125)	-0.110 (0.163)	-0.129 (0.160)	-0.169 (0.172)	-0.131 (0.179)
log(income) in 1000â¬	0.453*** (0.105)	0.457*** (0.107)	0.630*** (0.120)	0.630*** (0.123)	0.114 (0.122)	0.0390 (0.130)
Age	-0.00923 (0.00824)	-0.00812 (0.00834)	0.00524 (0.0118)	0.00669 (0.0121)	-0.0214* (0.0107)	-0.0142 (0.0112)
Emotional closeness with parents	0.155*** (0.0348)	0.144*** (0.0375)	0.107* (0.0506)	0.0854 (0.0552)	0.262*** (0.0475)	0.188*** (0.0553)
Children's sex	0.0386 (0.0416)	0.0441 (0.0414)	0.0485 (0.0549)	0.0568 (0.0545)	0.0416 (0.0547)	0.0528 (0.0566)
Nr. children 0-2	0.559*** (0.153)	0.575*** (0.152)	0.224 (0.210)	0.232 (0.209)	-0.220 (0.198)	-0.230 (0.203)
Nr. children 3-5.5	0.379** (0.143)	0.386** (0.141)	0.143 (0.194)	0.134 (0.193)	0.0371 (0.171)	0.0144 (0.176)
Nr. children 5.5-10	0.0680 (0.0814)	0.0870 (0.0807)	0.0479 (0.110)	0.0609 (0.109)	-0.0398 (0.105)	-0.000618 (0.111)
Nr. other children	-0.0697 (0.0586)	-0.0640 (0.0611)	-0.0754 (0.0633)	-0.0713 (0.0639)	-0.0585 (0.0615)	-0.00159 (0.0640)
Health	0.552*** (0.0422)	0.549*** (0.0427)	0.278*** (0.0489)	0.279*** (0.0501)	0.463*** (0.0490)	0.435*** (0.0504)
Obesity	0.0682 (0.0963)	0.0654 (0.0957)	0.194+ (0.118)	0.195+ (0.117)	0.0608 (0.115)	0.114 (0.119)
Pregnant	0.238 (0.252)	0.233 (0.249)	0.588** (0.227)	0.587** (0.225)	0.369 (0.249)	0.349 (0.260)
Cohabitation with partner	0.447* (0.199)	0.467* (0.201)	-0.212 (0.222)	-0.227 (0.222)	0.286 (0.192)	0.271 (0.193)
Widowed	-0.267 (0.814)	-0.229 (0.801)	0.149 (0.407)	0.141 (0.410)	0.120 (0.418)	0.237 (0.391)
Single child	0.152 (0.108)	0.138 (0.110)	0.470*** (0.141)	0.446** (0.145)	0.00309 (0.149)	-0.0789 (0.162)
No school degree (grandm.)	-0.0193 (0.163)	-0.0360 (0.176)	-0.687* (0.271)	-0.685* (0.285)	-1.119*** (0.289)	-1.283*** (0.340)
Upper school degree (grandm.)	-0.0198 (0.100)	-0.000154 (0.0985)	-0.336* (0.138)	-0.346* (0.137)	-0.137 (0.136)	-0.133 (0.136)
No school degree (grandf.)	0.239 (0.218)	0.302 (0.211)	0.630* (0.314)	0.688* (0.310)	0.306 (0.337)	0.326 (0.354)
Upper school degree (grandf.)	-0.0590 (0.0878)	-0.0833 (0.0869)	-0.0586 (0.123)	-0.0548 (0.122)	0.343** (0.118)	0.318** (0.119)
Children j6 in Kita	-0.0913 (0.114)	-0.0705 (0.116)	-0.190 (0.160)	-0.170 (0.161)	0.0168 (0.141)	0.119 (0.148)
Age youngest child	0.00553* (0.00247)	0.00598* (0.00247)	-0.00390 (0.00271)	-0.00383 (0.00271)	0.00938** (0.00293)	0.00953** (0.00297)
Children's mean health	0.148** (0.0551)	0.154** (0.0569)	0.240*** (0.0725)	0.242*** (0.0733)	0.285*** (0.0769)	0.368*** (0.0791)
Constant	3.333*** (0.581)	3.283*** (0.593)	2.654** (0.841)	2.327** (0.802)	1.984* (0.770)	1.521+ (0.811)
Observations	3242	3210	3190	3159	3243	3211

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.13: Regression table: Mothers' satisfaction with life, education/career and leisure

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS:General sat.	IV:General sat.	OLS:Sat. educ./career	IV:Sat. educ./career	OLS:Sat. leisure	IV:Sat. leisure
Grandparental care	-0.0173 (0.0504)	0.0159 (0.240)	0.118+ (0.0678)	0.0722 (0.301)	-0.0200 (0.0738)	0.875** (0.326)
No / lower school degree	-0.212+ (0.111)	-0.210+ (0.112)	-1.153*** (0.142)	-1.178*** (0.145)	-0.00724 (0.132)	0.0189 (0.137)
University degree	-0.0593 (0.0533)	-0.0666 (0.0535)	0.188** (0.0691)	0.191** (0.0696)	-0.0955 (0.0743)	-0.0627 (0.0751)
Working part-time	-0.0808 (0.0650)	-0.0893 (0.0723)	0.771*** (0.0972)	0.786*** (0.103)	-0.0895 (0.0899)	-0.202* (0.0987)
Working full-time	-0.124 (0.0823)	-0.148+ (0.0900)	1.012*** (0.114)	1.049*** (0.123)	-0.304** (0.111)	-0.425*** (0.119)
Partner working part-time	-0.126 (0.194)	-0.149 (0.193)	-0.436* (0.205)	-0.442* (0.206)	-0.0885 (0.222)	-0.0845 (0.223)
Partner working full-time	0.0779 (0.119)	0.0529 (0.119)	-0.285* (0.139)	-0.290* (0.139)	0.196 (0.143)	0.193 (0.143)
No partner	-0.200 (0.192)	-0.222 (0.199)	-0.303 (0.245)	-0.371 (0.255)	0.162 (0.219)	0.0399 (0.229)
Migrational background	0.108 (0.0805)	0.111 (0.0803)	-0.0923 (0.131)	-0.0886 (0.131)	-0.294* (0.138)	-0.303* (0.140)
log(income) in 1000â¬	0.479*** (0.0803)	0.472*** (0.0833)	0.662*** (0.0859)	0.644*** (0.0892)	0.140 (0.0920)	0.0817 (0.0966)
Age	-0.00760 (0.00596)	-0.00681 (0.00631)	0.00982 (0.00800)	0.0119 (0.00847)	-0.00890 (0.00789)	-0.00209 (0.00847)
Emotional closeness with parents	0.216*** (0.0285)	0.217*** (0.0292)	0.136*** (0.0368)	0.120** (0.0388)	0.235*** (0.0373)	0.190*** (0.0410)
Children's sex	-0.0414 (0.0340)	-0.0433 (0.0342)	-0.00281 (0.0433)	-0.00367 (0.0434)	-0.0339 (0.0463)	-0.0313 (0.0470)
Nr. children 0-2	0.203* (0.0935)	0.212* (0.0940)	0.186 (0.130)	0.201 (0.130)	-0.503*** (0.135)	-0.512*** (0.136)
Nr. children 3-5.5	0.128 (0.0976)	0.141 (0.0984)	0.193 (0.132)	0.207 (0.132)	-0.0483 (0.132)	-0.0683 (0.133)
Nr. children 5.5-10	-0.0424 (0.0443)	-0.0340 (0.0443)	-0.0630 (0.0592)	-0.0598 (0.0593)	-0.187** (0.0610)	-0.167** (0.0628)
Nr. other children	-0.0289 (0.0463)	-0.0301 (0.0481)	0.00730 (0.0493)	0.00814 (0.0506)	-0.0337 (0.0503)	-0.000835 (0.0520)
Health	0.498*** (0.0333)	0.496*** (0.0337)	0.312*** (0.0366)	0.309*** (0.0371)	0.441*** (0.0396)	0.440*** (0.0402)
Obesity	-0.0145 (0.0719)	-0.0179 (0.0715)	0.170+ (0.0898)	0.174+ (0.0898)	-0.0410 (0.0893)	-0.0304 (0.0900)
Pregnant	0.356*** (0.108)	0.365*** (0.107)	0.196 (0.138)	0.203 (0.138)	0.166 (0.154)	0.181 (0.156)
Cohabitation with partner	0.190 (0.136)	0.220 (0.141)	-0.307+ (0.165)	-0.268 (0.169)	0.204 (0.156)	0.217 (0.160)
Widowed	-0.0811 (0.625)	-0.0624 (0.620)	-0.228 (0.305)	-0.216 (0.306)	0.00563 (0.324)	0.125 (0.317)
Single child	0.174* (0.0718)	0.172* (0.0755)	0.247* (0.104)	0.235* (0.108)	0.0766 (0.108)	-0.0164 (0.114)
No school degree (grandm.)	0.141 (0.127)	0.101 (0.137)	-0.472* (0.195)	-0.503* (0.208)	-0.913*** (0.214)	-1.000*** (0.240)
Upper school degree (grandm.)	0.00351 (0.0744)	0.0152 (0.0728)	-0.211* (0.0950)	-0.219* (0.0951)	-0.229* (0.105)	-0.202+ (0.106)
No school degree (grandf.)	0.0734 (0.182)	0.109 (0.188)	0.335 (0.245)	0.384 (0.253)	0.243 (0.231)	0.262 (0.241)
Upper school degree (grandf.)	-0.0679 (0.0665)	-0.0783 (0.0662)	-0.0723 (0.0840)	-0.0640 (0.0836)	0.165+ (0.0894)	0.174+ (0.0893)
Children j6 in Kita	-0.106 (0.0720)	-0.109 (0.0731)	-0.156 (0.103)	-0.177+ (0.105)	-0.190+ (0.100)	-0.140 (0.104)
Age youngest child	0.000814 (0.00152)	0.00107 (0.00151)	-0.00150 (0.00173)	-0.00163 (0.00174)	0.00417* (0.00191)	0.00449* (0.00193)
Children's mean health	0.167*** (0.0409)	0.171*** (0.0415)	0.180*** (0.0523)	0.177*** (0.0528)	0.211*** (0.0555)	0.230*** (0.0562)
Constant	4.445*** (0.456)	4.363*** (0.467)	3.865*** (0.551)	3.619*** (0.561)	3.665*** (0.593)	3.293*** (0.614)
Observations	6066	5990	5944	5870	6066	5990

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.14: Regression table: Mothers' satisfaction with contacts, relationship and work-life balance (Age: 0-2 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS: Contacts	IV: Contacts	OLS: Relationship	IV: Relationship	OLS: Work-life balance	IV: Work-life balance
Grandparental care	-0.0326 (0.116)	-0.00713 (0.505)	0.120 (0.118)	-0.250 (0.493)	-0.308 (0.244)	-1.937* (0.776)
No / lower school degree	0.359+ (0.207)	0.352+ (0.207)	0.438+ (0.234)	0.440+ (0.231)	-0.254 (0.464)	-0.105 (0.454)
University degree	0.0738 (0.121)	0.0762 (0.120)	0.382** (0.124)	0.388** (0.122)	-0.0855 (0.270)	-0.0400 (0.269)
Working part-time	-0.148 (0.133)	-0.135 (0.146)	0.0718 (0.130)	0.131 (0.147)	0.446 (0.454)	0.643 (0.489)
Working full-time	0.0654 (0.156)	0.0639 (0.171)	0.162 (0.154)	0.213 (0.172)	-0.00803 (0.490)	0.202 (0.525)
Partner working part-time	-0.202 (0.330)	-0.178 (0.334)	0.296 (0.317)	0.367 (0.325)	1.026 (0.628)	1.486* (0.661)
Partner working full-time	0.0000491 (0.196)	0.0418 (0.197)	0.299 (0.244)	0.343 (0.247)	0.512 (0.452)	0.705 (0.463)
No partner	-0.0294 (0.417)	-0.0962 (0.454)	1.962*** (0.560)	1.898*** (0.572)	-0.544 (1.169)	-0.594 (1.316)
Migrational background	-0.536** (0.198)	-0.542** (0.201)	0.131 (0.161)	0.154 (0.165)	-0.0199 (0.487)	0.416 (0.484)
log(income) in 1000â¬	0.342* (0.148)	0.306+ (0.157)	0.384** (0.147)	0.382* (0.151)	-0.136 (0.295)	0.121 (0.341)
Age	-0.0135 (0.0117)	-0.0131 (0.0125)	-0.0305* (0.0125)	-0.0331* (0.0136)	-0.0367 (0.0274)	-0.0491+ (0.0286)
Emotional closeness with parents	0.331*** (0.0618)	0.346*** (0.0649)	0.130* (0.0655)	0.156* (0.0669)	-0.0272 (0.129)	0.0871 (0.135)
Children's sex	0.0150 (0.0722)	0.0229 (0.0716)	0.000505 (0.0698)	-0.0117 (0.0691)	-0.373* (0.165)	-0.299+ (0.169)
Nr. children 0-2	-0.582** (0.217)	-0.563** (0.216)	0.0617 (0.205)	0.0368 (0.206)	-1.478* (0.630)	-1.881** (0.636)
Nr. children 3-5.5	-0.139 (0.149)	-0.116 (0.151)	-0.118 (0.142)	-0.0818 (0.146)	-0.498 (0.306)	-0.380 (0.315)
Nr. children 5.5-10	-0.00847 (0.116)	-0.00843 (0.121)	0.137 (0.127)	0.117 (0.129)	-0.359 (0.233)	-0.542* (0.258)
Nr. other children	0.182 (0.127)	0.175 (0.127)	-0.0678 (0.144)	-0.0914 (0.142)	0.201 (0.295)	0.189 (0.298)
Health	0.321*** (0.0655)	0.330*** (0.0656)	0.186** (0.0624)	0.183** (0.0621)	0.460** (0.153)	0.485*** (0.141)
Obesity	0.0422 (0.148)	0.0361 (0.151)	-0.0485 (0.142)	-0.0262 (0.143)	-0.365 (0.342)	-0.136 (0.361)
Pregnant	-0.534* (0.211)	-0.525* (0.212)	0.263 (0.223)	0.248 (0.227)	0.327 (0.370)	0.199 (0.367)
Cohabitation with partner	-0.0997 (0.298)	-0.192 (0.305)	0.530 (0.357)	0.560 (0.373)	-0.790 (1.143)	-1.594 (1.310)
Widowed	-0.242 (0.709)	-0.250 (0.695)	1.362*** (0.278)	1.363*** (0.271)	3.866*** (0.649)	5.612*** (1.090)
Single child	0.0690 (0.179)	0.0511 (0.195)	0.0995 (0.180)	0.158 (0.190)	0.323 (0.381)	0.816+ (0.456)
No school degree (grandm.)	-0.807* (0.317)	-0.680+ (0.348)	0.259 (0.269)	0.320 (0.277)	-0.204 (0.822)	0.573 (0.942)
Upper school degree (grandm.)	-0.278+ (0.153)	-0.282+ (0.151)	0.114 (0.158)	0.115 (0.156)	-0.252 (0.279)	-0.430 (0.288)
No school degree (grandf.)	-0.161 (0.336)	-0.330 (0.353)	0.283 (0.372)	0.251 (0.370)	1.179 (0.970)	-0.313 (1.015)
Upper school degree (grandf.)	0.0345 (0.142)	0.0257 (0.142)	-0.231 (0.148)	-0.251+ (0.151)	0.203 (0.307)	0.229 (0.308)
Children j6 in Kita	0.0208 (0.112)	0.0151 (0.121)	-0.0135 (0.107)	-0.0536 (0.116)	0.284 (0.201)	0.137 (0.210)
Age youngest child	0.00120 (0.00607)	0.00100 (0.00644)	-0.0133* (0.00604)	-0.0123+ (0.00648)	-0.0156 (0.0133)	-0.0121 (0.0133)
Children's mean health	0.104 (0.0894)	0.0877 (0.0878)	0.0386 (0.0835)	0.0320 (0.0825)	0.164 (0.192)	0.102 (0.191)
Constant	5.207*** (0.942)	5.127*** (0.962)	6.933*** (1.025)	6.990*** (1.017)	6.492* (2.611)	7.633** (2.797)
Observations	2052	2027	1960	1944	535	529

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table E.15: Regression table: Mothers' satisfaction with contacts, relationship and work-life balance (Age: 3-5.5 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS: Contacts	IV: Contacts	OLS: Relationship	IV: Relationship	OLS: Work-life balance	IV: Work-life balance
Grandparental care	-0.0748 (0.108)	-0.221 (0.441)	-0.0149 (0.118)	-0.825 (0.545)	-0.108 (0.182)	1.204 (0.977)
No / lower school degree	-0.169 (0.226)	-0.167 (0.226)	0.204 (0.262)	0.164 (0.261)	-0.247 (0.433)	-0.333 (0.429)
University degree	-0.277* (0.111)	-0.263* (0.110)	0.158 (0.119)	0.154 (0.118)	-0.278 (0.198)	-0.310 (0.202)
Working part-time	0.0000678 (0.126)	-0.00675 (0.134)	-0.168 (0.140)	-0.0800 (0.152)	0.714 (0.543)	0.513 (0.561)
Working full-time	-0.0208 (0.147)	-0.00801 (0.161)	0.0308 (0.156)	0.136 (0.171)	0.0639 (0.545)	-0.223 (0.575)
Partner working part-time	-0.119 (0.320)	-0.103 (0.315)	0.0804 (0.290)	0.105 (0.296)	-0.197 (0.577)	-0.258 (0.563)
Partner working full-time	0.0181 (0.188)	0.0317 (0.186)	-0.154 (0.204)	-0.181 (0.206)	-0.0646 (0.384)	0.0849 (0.416)
No partner	0.258 (0.345)	0.162 (0.355)		0 (.)	-0.261 (0.561)	-0.271 (0.592)
Migrational background	-0.595** (0.187)	-0.576** (0.187)	0.379** (0.142)	0.386** (0.143)	0.0114 (0.352)	-0.277 (0.431)
log(income) in 1000â¬	0.475*** (0.128)	0.473*** (0.130)	0.491** (0.151)	0.533*** (0.152)	0.223 (0.205)	0.0706 (0.236)
Age	-0.0337** (0.0118)	-0.0343** (0.0131)	-0.0329* (0.0130)	-0.0424** (0.0144)	-0.00153 (0.0197)	0.0172 (0.0244)
Emotional closeness with parents	0.217*** (0.0576)	0.226*** (0.0588)	0.174** (0.0676)	0.218** (0.0728)	0.0378 (0.101)	-0.0223 (0.105)
Children's sex	-0.0637 (0.0609)	-0.0634 (0.0604)	-0.0635 (0.0656)	-0.0651 (0.0663)	-0.495*** (0.111)	-0.533*** (0.115)
Nr. children 0-2	-0.319+ (0.193)	-0.318 (0.193)	-0.120 (0.193)	-0.0894 (0.193)	0.0610 (0.372)	-0.0374 (0.382)
Nr. children 3-5.5	0.137 (0.198)	0.142 (0.196)	-0.0943 (0.221)	-0.0992 (0.222)	-0.522 (0.440)	-0.455 (0.422)
Nr. children 5.5-10	0.000582 (0.0902)	-0.0129 (0.0903)	-0.00617 (0.0939)	-0.0370 (0.0968)	-0.00465 (0.173)	-0.00571 (0.172)
Nr. other children	0.0687 (0.0962)	0.0696 (0.0939)	0.00333 (0.0952)	-0.0231 (0.0950)	0.195 (0.149)	0.228 (0.150)
Health	0.311*** (0.0618)	0.314*** (0.0612)	0.226*** (0.0614)	0.220*** (0.0604)	0.281** (0.103)	0.270** (0.103)
Obesity	0.216+ (0.124)	0.221+ (0.123)	-0.107 (0.150)	-0.126 (0.149)	-0.197 (0.278)	-0.271 (0.292)
Pregnant	0.241 (0.198)	0.231 (0.195)	0.598*** (0.167)	0.573*** (0.168)	0.534 (0.373)	0.458 (0.408)
Cohabitation with partner	0.128 (0.260)	0.0105 (0.273)	0.246 (0.304)	0.136 (0.325)	-0.484 (0.363)	0.0581 (0.550)
Widowed	0.519 (0.692)	0.456 (0.689)	1.170*** (0.322)	0.993** (0.346)	0.342 (1.130)	0.840 (1.027)
Single child	-0.000161 (0.159)	-0.0272 (0.166)	0.0910 (0.158)	0.139 (0.164)	-0.170 (0.239)	-0.336 (0.265)
No school degree (grandm.)	-1.308*** (0.335)	-1.267*** (0.361)	0.160 (0.332)	0.243 (0.360)	-1.708** (0.522)	-2.282*** (0.658)
Upper school degree (grandm.)	0.0517 (0.146)	0.0482 (0.145)	0.529*** (0.146)	0.522*** (0.148)	-0.316 (0.221)	-0.210 (0.228)
No school degree (grandf.)	0.300 (0.372)	0.274 (0.376)	-0.463 (0.393)	-0.498 (0.393)	2.433*** (0.659)	2.805*** (0.731)
Upper school degree (grandf.)	-0.0527 (0.129)	-0.0611 (0.127)	-0.218 (0.137)	-0.228+ (0.138)	-0.0166 (0.243)	-0.00499 (0.239)
Children j6 in Kita	-0.170 (0.122)	-0.180 (0.121)	-0.0156 (0.142)	-0.0312 (0.144)	-0.138 (0.281)	-0.0709 (0.276)
Age youngest child	-0.000289 (0.00455)	-0.000538 (0.00451)	-0.00347 (0.00484)	-0.00367 (0.00483)	-0.00363 (0.00865)	-0.000274 (0.00891)
Children's mean health	0.136 (0.0831)	0.130 (0.0828)	-0.00730 (0.0842)	-0.0227 (0.0837)	0.420** (0.141)	0.470** (0.146)
Constant	5.032*** (0.993)	4.961*** (1.056)	7.700*** (0.983)	8.192*** (1.036)	4.931** (1.523)	3.299+ (1.873)
Observations	2297	2275	2170	2153	917	911

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table E.16: Regression table: Mothers' satisfaction with contacts, relationship and work-life balance (Age: 5.5-10 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS: Contacts	IV: Contacts	OLS: Relationship	IV: Relationship	OLS: Work-life balance	IV: Work-life balance
Grandparental care	-0.00387 (0.0941)	0.894* (0.443)	0.174 (0.107)	0.159 (0.489)	-0.370* (0.153)	-0.207 (0.619)
No / lower school degree	-0.183 (0.193)	-0.114 (0.197)	0.134 (0.213)	0.130 (0.223)	-0.201 (0.326)	-0.140 (0.354)
University degree	-0.386*** (0.0937)	-0.330*** (0.0965)	0.269** (0.104)	0.262* (0.105)	-0.417** (0.154)	-0.398* (0.157)
Working part-time	-0.0145 (0.114)	-0.0969 (0.120)	-0.0865 (0.134)	-0.0844 (0.139)	0.641 (0.730)	0.403 (0.781)
Working full-time	-0.0520 (0.139)	-0.113 (0.145)	-0.0736 (0.167)	-0.0816 (0.173)	-0.166 (0.735)	-0.399 (0.785)
Partner working part-time	-0.196 (0.270)	-0.193 (0.272)	0.315 (0.281)	0.308 (0.284)	-0.102 (0.453)	-0.161 (0.448)
Partner working full-time	0.0988 (0.181)	0.121 (0.182)	0.267 (0.213)	0.265 (0.215)	0.0376 (0.315)	-0.0181 (0.312)
No partner	0.218 (0.288)	0.165 (0.290)	-0.211 (0.396)	-0.215 (0.410)	0.154 (0.445)	0.169 (0.446)
Migrational background	-0.423* (0.169)	-0.376* (0.171)	0.498** (0.164)	0.478** (0.162)	0.687* (0.302)	0.705* (0.296)
log(income) in 1000â¬	0.289* (0.119)	0.232+ (0.124)	0.429** (0.145)	0.437** (0.149)	0.0554 (0.170)	0.0402 (0.178)
Age	-0.0257* (0.0108)	-0.0190+ (0.0110)	-0.0165 (0.0128)	-0.0169 (0.0130)	0.0278+ (0.0168)	0.0285 (0.0175)
Emotional closeness with parents	0.320*** (0.0475)	0.264*** (0.0542)	0.110+ (0.0572)	0.118+ (0.0616)	0.184* (0.0724)	0.172* (0.0745)
Children's sex	0.0416 (0.0517)	0.0431 (0.0524)	0.0663 (0.0598)	0.0648 (0.0594)	-0.222* (0.0885)	-0.219* (0.0879)
Nr. children 0-2	0.0274 (0.223)	0.0133 (0.228)	0.332 (0.275)	0.337 (0.272)	0.0285 (0.342)	0.0416 (0.336)
Nr. children 3-5.5	0.0393 (0.184)	0.0142 (0.184)	0.187 (0.199)	0.191 (0.197)	0.347 (0.336)	0.348 (0.330)
Nr. children 5.5-10	-0.0260 (0.105)	-0.00231 (0.109)	0.0894 (0.120)	0.103 (0.121)	-0.00108 (0.190)	0.00330 (0.188)
Nr. other children	0.0902 (0.0629)	0.128+ (0.0653)	0.0544 (0.0672)	0.0587 (0.0702)	0.0987 (0.0973)	0.0950 (0.0967)
Health	0.294*** (0.0465)	0.275*** (0.0468)	0.187*** (0.0542)	0.190*** (0.0535)	0.292*** (0.0744)	0.289*** (0.0739)
Obesity	0.183 (0.112)	0.211+ (0.115)	0.0761 (0.124)	0.0683 (0.124)	-0.0953 (0.207)	-0.106 (0.201)
Pregnant	0.533+ (0.279)	0.531+ (0.279)	0.477 (0.302)	0.482 (0.300)	1.442** (0.446)	1.411** (0.430)
Cohabitation with partner	0.213 (0.207)	0.216 (0.205)	-0.248 (0.253)	-0.249 (0.253)	-0.0997 (0.303)	-0.0392 (0.312)
Widowed	1.577* (0.641)	1.671* (0.652)	1.129* (0.443)	1.133* (0.443)	-0.939 (0.716)	-0.925 (0.697)
Single child	-0.125 (0.145)	-0.199 (0.152)	-0.118 (0.176)	-0.129 (0.176)	0.0463 (0.210)	0.0539 (0.216)
No school degree (grandm.)	-0.484+ (0.254)	-0.581* (0.269)	-0.223 (0.281)	-0.181 (0.289)	-1.182** (0.450)	-1.305** (0.496)
Upper school degree (grandm.)	-0.0828 (0.136)	-0.0834 (0.136)	0.292+ (0.151)	0.306* (0.150)	-0.145 (0.200)	-0.166 (0.196)
No school degree (grandf.)	-0.0726 (0.324)	-0.152 (0.326)	0.418 (0.308)	0.439 (0.308)	1.575** (0.494)	1.645*** (0.498)
Upper school degree (grandf.)	0.169 (0.118)	0.154 (0.119)	-0.129 (0.135)	-0.136 (0.135)	-0.169 (0.181)	-0.160 (0.184)
Children j6 in Kita	0.0517 (0.138)	0.122 (0.141)	-0.239 (0.152)	-0.236 (0.154)	-0.440 (0.276)	-0.421 (0.279)
Age youngest child	0.00364 (0.00330)	0.00359 (0.00338)	0.000261 (0.00389)	0.000344 (0.00388)	0.00211 (0.00473)	0.00247 (0.00468)
Children's mean health	0.307*** (0.0715)	0.350*** (0.0738)	0.137+ (0.0792)	0.125 (0.0813)	0.274* (0.131)	0.291* (0.132)
Constant	3.136*** (0.821)	2.792** (0.852)	5.216*** (0.948)	5.240*** (0.963)	3.649* (1.503)	3.903* (1.562)
Observations	3243	3211	2977	2961	1557	1539

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table E.17: Regression table: Mothers' satisfaction with contacts, relationship and work-life balance

	(1) OLS: Contacts	(2) IV: Contacts	(3) OLS: Relationship	(4) IV: Relationship	(5) OLS: Work-life balance	(6) IV: Work-life balance
Grandparental care	-0.0465 (0.0674)	0.445 (0.299)	0.0771 (0.0736)	-0.0364 (0.334)	-0.255* (0.115)	-0.126 (0.443)
No / lower school degree	0.0654 (0.135)	0.0849 (0.140)	0.282+ (0.155)	0.276+ (0.156)	-0.0556 (0.257)	-0.0356 (0.256)
University degree	-0.256*** (0.0687)	-0.235*** (0.0693)	0.350*** (0.0742)	0.340*** (0.0744)	-0.304** (0.117)	-0.295* (0.118)
Working part-time	-0.0471 (0.0813)	-0.111 (0.0896)	-0.139 (0.0877)	-0.123 (0.0994)	0.482 (0.349)	0.442 (0.353)
Working full-time	-0.147 (0.0982)	-0.211+ (0.109)	-0.0954 (0.106)	-0.0886 (0.119)	-0.342 (0.355)	-0.380 (0.362)
Partner working part-time	-0.0330 (0.191)	-0.0529 (0.194)	0.210 (0.205)	0.206 (0.208)	0.122 (0.327)	0.0919 (0.324)
Partner working full-time	0.0625 (0.128)	0.0728 (0.130)	0.137 (0.151)	0.132 (0.154)	0.231 (0.235)	0.208 (0.233)
No partner	0.123 (0.215)	0.0280 (0.223)	0.655 (0.542)	0.611 (0.541)	0.133 (0.333)	0.0611 (0.338)
Migrational background	-0.482*** (0.120)	-0.485*** (0.120)	0.255* (0.108)	0.253* (0.107)	0.337 (0.221)	0.341 (0.221)
log(income) in 1000â¬	0.410*** (0.0885)	0.362*** (0.0924)	0.460*** (0.0999)	0.462*** (0.102)	0.0773 (0.136)	0.0529 (0.144)
Age	-0.0166* (0.00746)	-0.0119 (0.00795)	-0.0343*** (0.00835)	-0.0352*** (0.00875)	-0.00144 (0.0124)	0.00176 (0.0133)
Emotional closeness with parents	0.281*** (0.0354)	0.257*** (0.0381)	0.114** (0.0412)	0.128** (0.0434)	0.126* (0.0587)	0.114+ (0.0618)
Children's sex	0.0124 (0.0409)	0.0116 (0.0412)	0.0229 (0.0453)	0.0191 (0.0454)	-0.270*** (0.0739)	-0.269*** (0.0734)
Nr. children 0-2	-0.267* (0.127)	-0.270* (0.127)	0.0870 (0.133)	0.0946 (0.133)	-0.167 (0.267)	-0.163 (0.265)
Nr. children 3-5.5	-0.0338 (0.117)	-0.0407 (0.117)	-0.0375 (0.123)	-0.0304 (0.123)	-0.390 (0.242)	-0.376 (0.241)
Nr. children 5.5-10	-0.0391 (0.0587)	-0.0300 (0.0595)	0.0250 (0.0657)	0.0289 (0.0659)	-0.115 (0.104)	-0.111 (0.105)
Nr. other children	0.101* (0.0500)	0.122* (0.0509)	0.0606 (0.0528)	0.0563 (0.0546)	0.0630 (0.0762)	0.0647 (0.0768)
Health	0.330*** (0.0373)	0.330*** (0.0377)	0.180*** (0.0396)	0.181*** (0.0394)	0.373*** (0.0606)	0.368*** (0.0611)
Obesity	0.102 (0.0835)	0.102 (0.0835)	-0.0242 (0.0911)	-0.0306 (0.0910)	-0.238 (0.156)	-0.244 (0.154)
Pregnant	0.0187 (0.143)	0.0322 (0.142)	0.318* (0.148)	0.324* (0.148)	0.602* (0.251)	0.614* (0.251)
Cohabitation with partner	-0.0256 (0.157)	-0.0240 (0.161)	0.0489 (0.193)	0.0552 (0.198)	-0.132 (0.250)	-0.115 (0.267)
Widowed	0.795 (0.636)	0.870 (0.641)	1.435*** (0.356)	1.427*** (0.357)	-0.954 (0.713)	-0.943 (0.714)
Single child	-0.0329 (0.104)	-0.0991 (0.108)	0.0290 (0.115)	0.0285 (0.116)	-0.0123 (0.162)	-0.0296 (0.171)
No school degree (grandm.)	-0.636*** (0.191)	-0.623** (0.206)	0.0783 (0.204)	0.103 (0.211)	-0.946** (0.307)	-1.016** (0.344)
Upper school degree (grandm.)	-0.165+ (0.0958)	-0.148 (0.0964)	0.150 (0.100)	0.159 (0.0999)	-0.248+ (0.149)	-0.247+ (0.148)
No school degree (grandf.)	-0.0968 (0.219)	-0.182 (0.229)	0.148 (0.236)	0.143 (0.237)	1.630*** (0.361)	1.640*** (0.382)
Upper school degree (grandf.)	0.0347 (0.0842)	0.0350 (0.0845)	-0.143 (0.0871)	-0.152+ (0.0870)	-0.0842 (0.145)	-0.0769 (0.144)
Children j6 in Kita	-0.0281 (0.0868)	-0.00336 (0.0893)	-0.0305 (0.0933)	-0.0389 (0.0957)	0.0126 (0.182)	0.00985 (0.182)
Age youngest child	-0.000282 (0.00183)	-0.000224 (0.00186)	-0.000735 (0.00209)	-0.000701 (0.00210)	-0.0000962 (0.00329)	0.0000703 (0.00337)
Children's mean health	0.182*** (0.0510)	0.186*** (0.0513)	0.0764 (0.0556)	0.0694 (0.0557)	0.245** (0.0910)	0.258** (0.0928)
Constant	4.478*** (0.566)	4.219*** (0.590)	7.048*** (0.624)	7.068*** (0.629)	4.628*** (0.971)	4.486*** (1.034)
Observations	6067	5991	5616	5572	2586	2555

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

E.3 Satisfaction Father

Table E.18: Regression table: Fathers' satisfaction with life, education/career and leisure (Age: 0-2 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS:General sat.	IV:General sat.	OLS:Sat. educ./career	IV:Sat. educ./career	OLS:Sat. leisure	IV:Sat. leisure
Grandparental care	0.116 (0.0764)	0.00290 (0.295)	0.150 (0.103)	-1.034* (0.444)	-0.116 (0.121)	0.212 (0.478)
No / lower school degree	-0.239 (0.180)	-0.270 (0.184)	-0.0839 (0.277)	-0.0735 (0.291)	-0.0799 (0.233)	-0.0789 (0.233)
University degree	0.0347 (0.0832)	0.00810 (0.0818)	0.231* (0.117)	0.178 (0.120)	-0.372** (0.123)	-0.374** (0.123)
Working part-time	0.0965 (0.273)	0.0108 (0.273)	2.387*** (0.456)	2.266*** (0.513)	0.535 (0.326)	0.465 (0.330)
Working full-time	0.0194 (0.204)	0.00455 (0.205)	1.364*** (0.331)	1.314*** (0.353)	-0.331 (0.229)	-0.356 (0.236)
Partner working part-time	-0.0758 (0.1000)	-0.0571 (0.102)	0.0303 (0.123)	0.203 (0.146)	0.264+ (0.135)	0.224 (0.148)
Partner working full-time	-0.105 (0.118)	-0.107 (0.120)	0.0372 (0.172)	0.156 (0.177)	0.393* (0.163)	0.362* (0.172)
Migrational background	0.151 (0.146)	0.164 (0.140)	0.414+ (0.250)	0.405 (0.252)	0.0132 (0.291)	0.0479 (0.289)
log(income) in 1000â¬	0.427*** (0.113)	0.459*** (0.111)	0.522*** (0.158)	0.676*** (0.160)	0.223 (0.148)	0.230 (0.154)
Age	-0.0336*** (0.00813)	-0.0341*** (0.00787)	-0.0113 (0.0120)	-0.0112 (0.0121)	-0.00941 (0.0121)	-0.0131 (0.0122)
Emotional closeness with parents	0.228*** (0.0462)	0.247*** (0.0470)	0.170* (0.0719)	0.212** (0.0749)	0.0654 (0.0718)	0.0648 (0.0752)
Children's sex	-0.0486 (0.0548)	-0.0420 (0.0539)	-0.0276 (0.0759)	0.0399 (0.0779)	0.0626 (0.0763)	0.0537 (0.0767)
Nr. children 0-2	-0.228+ (0.130)	-0.165 (0.132)	-0.365+ (0.200)	-0.0646 (0.210)	-0.672*** (0.204)	-0.688** (0.211)
Nr. children 3-5.5	-0.107 (0.107)	-0.114 (0.106)	-0.112 (0.154)	-0.0339 (0.151)	-0.254+ (0.145)	-0.254+ (0.146)
Nr. children 5.5-10	-0.0842 (0.0815)	-0.0907 (0.0838)	-0.00819 (0.0999)	-0.0362 (0.102)	-0.111 (0.117)	-0.0832 (0.119)
Nr. other children	-0.0439 (0.0949)	-0.00367 (0.0964)	0.0544 (0.131)	-0.0747 (0.145)	0.0774 (0.139)	0.155 (0.145)
Health	0.337*** (0.0484)	0.320*** (0.0489)	0.283*** (0.0639)	0.301*** (0.0678)	0.309*** (0.0668)	0.300*** (0.0691)
Obesity	-0.0514 (0.0940)	-0.0805 (0.0923)	0.270* (0.125)	0.149 (0.125)	0.0190 (0.150)	0.0305 (0.149)
Pregnant	0.0350 (0.131)	0.0618 (0.131)	0.274 (0.190)	0.374+ (0.196)	-0.162 (0.190)	-0.188 (0.194)
Cohabitation with partner	0.802* (0.335)	0.796* (0.403)	-0.671+ (0.390)	-1.033* (0.439)	0.0716 (0.368)	-0.00223 (0.391)
Single child	-0.146 (0.131)	-0.133 (0.129)	-0.0166 (0.182)	0.0418 (0.185)	-0.187 (0.218)	-0.191 (0.220)
No school degree (grandm.)	0.442 (0.404)	0.532 (0.448)	-0.457 (0.470)	-0.385 (0.461)	-0.138 (0.466)	0.154 (0.498)
Upper school degree (grandm.)	0.242* (0.102)	0.196+ (0.100)	-0.228 (0.141)	-0.288* (0.140)	0.0304 (0.156)	0.0305 (0.156)
No school degree (grandf.)	-0.276 (0.305)	-0.400 (0.323)	-0.211 (0.422)	-0.776* (0.390)	0.584 (0.390)	0.431 (0.413)
Upper school degree (grandf.)	-0.315*** (0.0907)	-0.301*** (0.0878)	0.0175 (0.120)	0.0324 (0.119)	0.0820 (0.135)	0.0703 (0.136)
Children j6 in Kita	-0.0318 (0.0783)	-0.0194 (0.0763)	0.0681 (0.110)	0.00654 (0.116)	-0.00730 (0.115)	-0.00143 (0.117)
Age youngest child	-0.00898* (0.00406)	-0.00907* (0.00418)	-0.00814 (0.00570)	-0.00278 (0.00609)	-0.00244 (0.00580)	-0.00357 (0.00617)
Children's mean health	0.197** (0.0606)	0.212*** (0.0598)	0.144 (0.0931)	0.112 (0.0979)	0.149+ (0.0904)	0.146 (0.0922)
Constant	5.398*** (0.626)	5.279*** (0.681)	4.837*** (0.988)	4.855*** (1.052)	4.778*** (0.998)	4.971*** (1.014)
Observations	1882	1849	1880	1847	1881	1848

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.19: Regression table: Fathers' satisfaction with life, education/career and leisure (Age: 3-5.5 years)

	(1) OLS:General sat.	(2) IV:General sat.	(3) OLS:Sat. educ./career	(4) IV:Sat. educ./career	(5) OLS:Sat. leisure	(6) IV:Sat. leisure
Grandparental care	0.0941 (0.0792)	-0.371 (0.319)	0.00159 (0.107)	-0.955* (0.429)	-0.0272 (0.118)	-0.422 (0.513)
No / lower school degree	-0.156 (0.225)	-0.0456 (0.228)	-0.0831 (0.337)	-0.0434 (0.344)	-0.332 (0.287)	-0.254 (0.283)
University degree	0.0191 (0.0805)	0.0377 (0.0797)	0.251* (0.120)	0.271* (0.122)	-0.306* (0.130)	-0.281* (0.130)
Working part-time	0.0609 (0.294)	0.000239 (0.290)	1.309** (0.484)	1.412** (0.491)	0.369 (0.358)	0.361 (0.348)
Working full-time	0.229 (0.243)	0.190 (0.240)	1.313*** (0.396)	1.437*** (0.398)	-0.232 (0.277)	-0.204 (0.270)
Partner working part-time	-0.0561 (0.0888)	-0.00113 (0.0992)	0.0367 (0.132)	0.190 (0.145)	0.0726 (0.136)	0.122 (0.157)
Partner working full-time	-0.116 (0.108)	-0.0921 (0.108)	-0.115 (0.174)	0.00764 (0.174)	0.250 (0.161)	0.310+ (0.161)
Migrational background	-0.0461 (0.155)	-0.0885 (0.156)	0.0760 (0.236)	0.0698 (0.237)	-0.0609 (0.278)	-0.0494 (0.271)
log(income) in 1000â¬	0.655*** (0.116)	0.685*** (0.112)	0.559** (0.172)	0.528** (0.164)	0.0796 (0.171)	0.0774 (0.171)
Age	-0.0417*** (0.00898)	-0.0417*** (0.00899)	0.0111 (0.0135)	0.0102 (0.0137)	-0.0272* (0.0127)	-0.0251* (0.0126)
Emotional closeness with parents	0.210*** (0.0463)	0.260*** (0.0505)	0.192** (0.0684)	0.271*** (0.0710)	0.0502 (0.0689)	0.0915 (0.0793)
Children's sex	-0.145** (0.0547)	-0.156** (0.0541)	-0.0131 (0.0711)	0.0123 (0.0715)	0.106 (0.0722)	0.100 (0.0715)
Nr. children 0-2	-0.216 (0.135)	-0.223+ (0.135)	-0.485** (0.185)	-0.415* (0.192)	-0.349+ (0.182)	-0.369* (0.177)
Nr. children 3-5.5	0.117 (0.130)	0.0760 (0.130)	-0.0246 (0.245)	0.00455 (0.241)	-0.0591 (0.211)	-0.0935 (0.208)
Nr. children 5.5-10	-0.00731 (0.0712)	-0.0382 (0.0714)	0.0287 (0.0977)	0.0235 (0.0989)	-0.0753 (0.105)	-0.0993 (0.106)
Nr. other children	-0.0240 (0.0718)	0.0142 (0.0721)	-0.0818 (0.102)	-0.156 (0.107)	0.103 (0.0995)	0.109 (0.102)
Health	0.372*** (0.0541)	0.364*** (0.0538)	0.237*** (0.0664)	0.253*** (0.0666)	0.192** (0.0706)	0.198** (0.0704)
Obesity	0.00362 (0.0993)	-0.00227 (0.101)	0.415*** (0.126)	0.291* (0.126)	0.0976 (0.146)	0.0783 (0.147)
Pregnant	0.209 (0.132)	0.225+ (0.135)	-0.0713 (0.206)	-0.0239 (0.211)	-0.247 (0.214)	-0.232 (0.209)
Cohabitation with partner	0.775** (0.284)	0.716* (0.293)	-0.324 (0.397)	-0.416 (0.394)	-0.00553 (0.436)	-0.0165 (0.459)
Single child	0.0115 (0.0993)	0.0206 (0.100)	-0.0658 (0.150)	-0.0108 (0.160)	0.303 (0.195)	0.325 (0.199)
No school degree (grandm.)	0.968** (0.351)	0.967* (0.418)	-0.321 (0.415)	-0.552 (0.445)	0.769+ (0.403)	1.032* (0.437)
Upper school degree (grandm.)	0.0150 (0.0955)	0.0398 (0.0943)	-0.103 (0.150)	-0.0773 (0.149)	0.0642 (0.166)	0.0834 (0.166)
No school degree (grandf.)	-0.493 (0.300)	-0.395 (0.340)	-0.466 (0.439)	-0.524 (0.437)	0.442 (0.411)	0.233 (0.442)
Upper school degree (grandf.)	-0.0491 (0.0881)	-0.0509 (0.0858)	0.0568 (0.129)	0.0511 (0.130)	0.291* (0.147)	0.272+ (0.146)
Children j6 in Kita	-0.0439 (0.0804)	-0.0377 (0.0813)	0.101 (0.140)	0.0556 (0.139)	-0.0509 (0.122)	-0.0560 (0.122)
Age youngest child	-0.00343 (0.00324)	-0.00441 (0.00325)	-0.0131** (0.00436)	-0.0142** (0.00456)	0.00104 (0.00460)	-0.000539 (0.00465)
Children's mean health	0.0759 (0.0726)	0.0769 (0.0738)	0.0647 (0.0944)	0.0431 (0.0952)	0.117 (0.0934)	0.0802 (0.0927)
Constant	5.469*** (0.714)	5.514*** (0.719)	4.486*** (1.011)	4.422*** (1.023)	6.079*** (1.063)	6.136*** (1.071)
Observations	1815	1796	1813	1794	1812	1793

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.20: Regression table: Fathers' satisfaction with life, education/career and leisure (Age: 5.5-10 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS:General sat.	IV:General sat.	OLS:Sat. educ./career	IV:Sat. educ./career	OLS:Sat. leisure	IV:Sat. leisure
Grandparental care	0.0550 (0.0753)	0.148 (0.362)	-0.0635 (0.0894)	-0.287 (0.434)	-0.155 (0.105)	-0.284 (0.509)
No / lower school degree	-0.154 (0.210)	-0.0183 (0.216)	0.107 (0.256)	0.0741 (0.259)	-0.173 (0.273)	-0.0647 (0.279)
University degree	-0.00556 (0.0811)	-0.00891 (0.0820)	0.382*** (0.103)	0.381*** (0.104)	-0.101 (0.112)	-0.0824 (0.113)
Working part-time	0.517 (0.318)	0.444 (0.319)	1.010* (0.422)	1.053* (0.423)	0.555 (0.386)	0.533 (0.386)
Working full-time	0.442 (0.286)	0.401 (0.290)	1.362*** (0.360)	1.387*** (0.368)	-0.0207 (0.318)	-0.0324 (0.321)
Partner working part-time	-0.147 (0.0943)	-0.179+ (0.100)	-0.161 (0.108)	-0.125 (0.116)	-0.00930 (0.128)	-0.00940 (0.139)
Partner working full-time	-0.141 (0.113)	-0.173 (0.112)	-0.210 (0.143)	-0.184 (0.142)	0.152 (0.148)	0.147 (0.150)
No partner	-2.002** (0.707)	-1.903** (0.700)	-6.624*** (1.772)	-6.663*** (1.811)	3.168*** (0.557)	2.925*** (0.609)
Migrational background	-0.138 (0.146)	-0.236 (0.145)	-0.345+ (0.202)	-0.333 (0.206)	-0.431+ (0.230)	-0.425+ (0.229)
log(income) in 1000â¬	0.506*** (0.0980)	0.521*** (0.0980)	0.317** (0.122)	0.304* (0.122)	-0.188 (0.143)	-0.168 (0.141)
Age	-0.0338*** (0.00991)	-0.0311** (0.00986)	-0.0241+ (0.0123)	-0.0245* (0.0124)	-0.000556 (0.0123)	0.000512 (0.0123)
Emotional closeness with parents	0.228*** (0.0445)	0.238*** (0.0539)	0.321*** (0.0572)	0.335*** (0.0678)	0.0526 (0.0620)	0.0612 (0.0734)
Children's sex	-0.000314 (0.0472)	-0.00931 (0.0470)	0.0210 (0.0548)	0.0253 (0.0542)	0.145* (0.0638)	0.138* (0.0631)
Nr. children 0-2	-0.261+ (0.145)	-0.293* (0.145)	-0.379* (0.176)	-0.367* (0.176)	-0.417* (0.186)	-0.416* (0.185)
Nr. children 3-5.5	-0.168 (0.142)	-0.199 (0.142)	-0.319+ (0.187)	-0.304 (0.189)	-0.461* (0.200)	-0.460* (0.198)
Nr. children 5.5-10	0.0555 (0.0768)	0.0537 (0.0777)	-0.0517 (0.0974)	-0.0538 (0.0970)	-0.102 (0.110)	-0.105 (0.110)
Nr. other children	-0.0156 (0.0556)	0.0174 (0.0551)	0.0504 (0.0631)	0.0362 (0.0641)	-0.0670 (0.0690)	-0.0511 (0.0703)
Health	0.373*** (0.0459)	0.355*** (0.0458)	0.310*** (0.0558)	0.310*** (0.0558)	0.276*** (0.0605)	0.274*** (0.0601)
Obesity	-0.201* (0.0896)	-0.156+ (0.0874)	0.0548 (0.114)	0.0322 (0.113)	0.171 (0.124)	0.191 (0.124)
Pregnant	0.140 (0.157)	0.119 (0.156)	-0.307 (0.215)	-0.303 (0.211)	0.187 (0.307)	0.136 (0.300)
Cohabitation with partner	0.908** (0.324)	0.943** (0.325)	0.223 (0.267)	0.203 (0.268)	0.284 (0.326)	0.273 (0.329)
Single child	-0.0582 (0.106)	-0.0749 (0.105)	-0.142 (0.144)	-0.142 (0.142)	0.299* (0.147)	0.296* (0.146)
No school degree (grandm.)	0.595 (0.369)	0.490 (0.384)	0.127 (0.323)	0.0642 (0.325)	0.326 (0.439)	0.548 (0.432)
Upper school degree (grandm.)	-0.116 (0.0927)	-0.104 (0.0911)	-0.103 (0.116)	-0.106 (0.115)	0.0292 (0.149)	0.0497 (0.147)
No school degree (grandf.)	-0.311 (0.277)	-0.129 (0.288)	0.0572 (0.268)	0.0592 (0.267)	0.0854 (0.362)	-0.00500 (0.366)
Upper school degree (grandf.)	0.0644 (0.0815)	0.0686 (0.0815)	-0.00227 (0.101)	-0.00509 (0.101)	0.197 (0.127)	0.184 (0.127)
Children j6 in Kita	0.0922 (0.113)	0.115 (0.113)	0.242 (0.152)	0.225 (0.155)	0.0968 (0.170)	0.0872 (0.168)
Age youngest child	-0.00156 (0.00174)	-0.00188 (0.00172)	-0.00305 (0.00212)	-0.00298 (0.00208)	0.000311 (0.00235)	-0.0000726 (0.00234)
Children's mean health	0.181** (0.0636)	0.187** (0.0625)	0.0511 (0.0786)	0.0608 (0.0780)	0.0441 (0.0877)	0.0266 (0.0867)
Constant	4.834*** (0.812)	4.767*** (0.799)	4.909*** (0.926)	4.852*** (0.924)	5.689*** (1.026)	5.684*** (1.020)
Observations	2210	2190	2209	2189	2210	2190

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.21: Regression table: Fathers' satisfaction with life, education/career and leisure

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS:General sat.	IV:General sat.	OLS:Sat. educ./career	IV:Sat. educ./career	OLS:Sat. leisure	IV:Sat. leisure
Grandparental care	0.0252 (0.0492)	0.0248 (0.218)	0.0355 (0.0667)	-0.685* (0.301)	-0.130+ (0.0746)	-0.0822 (0.336)
No / lower school degree	-0.1000 (0.121)	-0.0238 (0.123)	-0.0278 (0.187)	-0.0311 (0.196)	-0.150 (0.170)	-0.0769 (0.172)
University degree	0.0260 (0.0515)	0.0262 (0.0519)	0.240** (0.0730)	0.248*** (0.0748)	-0.232** (0.0778)	-0.229** (0.0787)
Working part-time	0.271 (0.183)	0.193 (0.185)	1.227*** (0.322)	1.242*** (0.343)	0.414+ (0.225)	0.403+ (0.228)
Working full-time	0.277+ (0.149)	0.233 (0.153)	1.179*** (0.249)	1.186*** (0.265)	-0.0693 (0.174)	-0.0567 (0.179)
Partner working part-time	-0.119+ (0.0620)	-0.136* (0.0680)	0.0182 (0.0809)	0.133 (0.0938)	0.121 (0.0880)	0.110 (0.0990)
Partner working full-time	-0.0810 (0.0715)	-0.0987 (0.0730)	-0.0461 (0.105)	0.0378 (0.107)	0.319** (0.102)	0.334** (0.105)
No partner	-2.406*** (0.568)	-2.425*** (0.589)	-6.461*** (1.576)	-6.647*** (1.725)	3.064*** (0.378)	2.924*** (0.393)
Migrational background	-0.0487 (0.1000)	-0.0716 (0.0986)	-0.115 (0.159)	-0.0602 (0.162)	-0.230 (0.165)	-0.200 (0.163)
log(income) in 1000â¬	0.508*** (0.0688)	0.538*** (0.0689)	0.488*** (0.0987)	0.528*** (0.0977)	-0.0729 (0.101)	-0.0843 (0.102)
Age	-0.0310*** (0.00538)	-0.0304*** (0.00533)	-0.0131 (0.00836)	-0.0151+ (0.00848)	-0.00683 (0.00812)	-0.00535 (0.00803)
Emotional closeness with parents	0.207*** (0.0283)	0.221*** (0.0314)	0.198*** (0.0420)	0.245*** (0.0456)	0.0799+ (0.0435)	0.0839+ (0.0489)
Children's sex	-0.0374 (0.0337)	-0.0425 (0.0333)	-0.0229 (0.0442)	0.000351 (0.0451)	0.0892+ (0.0477)	0.0800+ (0.0477)
Nr. children 0-2	-0.196* (0.0784)	-0.213** (0.0796)	-0.363** (0.113)	-0.251* (0.113)	-0.474*** (0.114)	-0.505*** (0.116)
Nr. children 3-5.5	-0.107 (0.0766)	-0.124 (0.0765)	-0.216+ (0.120)	-0.175 (0.119)	-0.381*** (0.114)	-0.395*** (0.114)
Nr. children 5.5-10	-0.0603 (0.0432)	-0.0633 (0.0437)	-0.0597 (0.0576)	-0.0673 (0.0585)	-0.141* (0.0638)	-0.150* (0.0637)
Nr. other children	-0.0124 (0.0411)	0.0144 (0.0409)	0.0257 (0.0530)	-0.0207 (0.0554)	-0.0235 (0.0550)	-0.00359 (0.0571)
Health	0.401*** (0.0318)	0.380*** (0.0319)	0.296*** (0.0396)	0.305*** (0.0407)	0.298*** (0.0428)	0.284*** (0.0431)
Obesity	-0.0650 (0.0603)	-0.0460 (0.0599)	0.204* (0.0808)	0.127 (0.0810)	0.0923 (0.0926)	0.101 (0.0932)
Pregnant	0.0281 (0.0908)	0.0227 (0.0920)	-0.0207 (0.139)	0.0360 (0.140)	-0.198 (0.141)	-0.210 (0.142)
Cohabitation with partner	0.516** (0.176)	0.540** (0.189)	-0.140 (0.207)	-0.268 (0.214)	0.0483 (0.242)	0.0753 (0.253)
Single child	-0.108 (0.0749)	-0.107 (0.0747)	-0.0830 (0.104)	-0.0543 (0.105)	0.230+ (0.118)	0.240* (0.119)
No school degree (grandm.)	0.503* (0.229)	0.518* (0.251)	-0.177 (0.273)	-0.176 (0.269)	0.277 (0.272)	0.381 (0.287)
Upper school degree (grandm.)	0.0849 (0.0644)	0.0671 (0.0640)	-0.124 (0.0923)	-0.132 (0.0927)	0.130 (0.104)	0.111 (0.104)
No school degree (grandf.)	-0.248 (0.190)	-0.214 (0.199)	-0.131 (0.257)	-0.333 (0.246)	0.330 (0.255)	0.274 (0.266)
Upper school degree (grandf.)	-0.104+ (0.0552)	-0.0912+ (0.0546)	0.0348 (0.0775)	0.0380 (0.0779)	0.137 (0.0883)	0.150+ (0.0883)
Children j6 in Kita	-0.0671 (0.0598)	-0.0535 (0.0596)	0.0837 (0.0952)	0.0579 (0.0961)	0.0718 (0.0909)	0.0716 (0.0911)
Age youngest child	-0.00260* (0.00112)	-0.00309** (0.00111)	-0.00443** (0.00154)	-0.00381* (0.00155)	-0.000512 (0.00162)	-0.00122 (0.00160)
Children's mean health	0.128** (0.0413)	0.133** (0.0414)	0.0960+ (0.0564)	0.0848 (0.0570)	0.0806 (0.0593)	0.0741 (0.0591)
Constant	5.543*** (0.422)	5.543*** (0.430)	4.924*** (0.646)	4.909*** (0.670)	4.792*** (0.666)	4.823*** (0.672)
Observations	4518	4460	4513	4455	4516	4458

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (d) in the appendix. Source: Pairfam (2009-2019), weighted, own calculation.

Table E.22: Regression table: Fathers' satisfaction with contacts, relationship and work-life balance (Age: 0-2 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS: Contacts	IV: Contacts	OLS: Relationship	IV: Relationship	OLS: Work-life balance	IV: Work-life balance
Grandparental care	-0.122 (0.115)	-0.229 (0.481)	-0.0876 (0.119)	-0.455 (0.485)	0.0271 (0.161)	0.292 (0.651)
No / lower school degree	0.148 (0.262)	0.161 (0.260)	0.246 (0.266)	0.327 (0.254)	-0.381 (0.356)	-0.448 (0.345)
University degree	-0.165 (0.126)	-0.155 (0.124)	0.154 (0.140)	0.151 (0.139)	0.313+ (0.181)	0.272 (0.177)
Working part-time	0.481 (0.436)	0.618 (0.426)	-0.0375 (0.376)	-0.0985 (0.378)	1.153+ (0.611)	0.907 (0.589)
Working full-time	0.242 (0.296)	0.251 (0.308)	-0.314 (0.256)	-0.302 (0.256)	-0.125 (0.533)	-0.370 (0.520)
Partner working part-time	0.181 (0.135)	0.211 (0.148)	-0.0966 (0.148)	-0.0575 (0.159)	0.188 (0.183)	0.125 (0.191)
Partner working full-time	0.179 (0.196)	0.186 (0.200)	0.103 (0.178)	0.0920 (0.193)	0.137 (0.246)	0.0623 (0.252)
Migrational background	-0.0516 (0.257)	-0.0733 (0.249)	0.164 (0.234)	0.126 (0.235)	1.844*** (0.452)	1.809*** (0.426)
log(income) in 1000â¬	0.427** (0.163)	0.433** (0.167)	0.131 (0.153)	0.173 (0.153)	0.447* (0.226)	0.515* (0.222)
Age	-0.0272* (0.0122)	-0.0307* (0.0121)	-0.0237+ (0.0132)	-0.0246+ (0.0131)	-0.0183 (0.0163)	-0.0198 (0.0165)
Emotional closeness with parents	0.171* (0.0784)	0.169* (0.0799)	0.307*** (0.0783)	0.348*** (0.0803)	-0.151 (0.0997)	-0.179+ (0.102)
Children's sex	-0.0863 (0.0778)	-0.0860 (0.0781)	-0.0948 (0.0787)	-0.0829 (0.0773)	-0.111 (0.107)	-0.0961 (0.105)
Nr. children 0-2	-0.491* (0.218)	-0.432+ (0.226)	0.0780 (0.190)	0.182 (0.201)	-0.560* (0.264)	-0.633* (0.285)
Nr. children 3-5.5	-0.594*** (0.152)	-0.583*** (0.155)	-0.184 (0.174)	-0.166 (0.171)	-0.185 (0.231)	-0.252 (0.224)
Nr. children 5.5-10	-0.179 (0.124)	-0.163 (0.125)	-0.199 (0.151)	-0.218 (0.147)	0.136 (0.173)	0.144 (0.192)
Nr. other children	0.0703 (0.146)	0.0770 (0.156)	0.184 (0.151)	0.189 (0.163)	-0.00368 (0.164)	0.0258 (0.178)
Health	0.258*** (0.0660)	0.266*** (0.0683)	0.225** (0.0724)	0.221** (0.0731)	0.278** (0.0888)	0.275** (0.0889)
Obesity	-0.144 (0.153)	-0.122 (0.151)	-0.0739 (0.157)	-0.102 (0.155)	-0.00870 (0.199)	0.00964 (0.204)
Pregnant	-0.0237 (0.186)	-0.0497 (0.185)	0.0859 (0.230)	0.143 (0.228)	-0.0185 (0.284)	-0.0608 (0.279)
Cohabitation with partner	-0.185 (0.405)	-0.0311 (0.463)	1.342** (0.430)	1.260* (0.542)	0.589 (0.607)	-0.0259 (0.604)
Single child	-0.0993 (0.238)	-0.105 (0.247)	-0.250 (0.195)	-0.298 (0.198)	-0.835** (0.311)	-0.775* (0.317)
No school degree (grandm.)	-0.0548 (0.522)	0.615 (0.481)	1.057+ (0.553)	0.862 (0.620)	1.725** (0.603)	1.574** (0.604)
Upper school degree (grandm.)	0.146 (0.158)	0.114 (0.155)	0.0773 (0.158)	0.0970 (0.157)	-0.416* (0.211)	-0.404+ (0.207)
No school degree (grandf.)	0.565 (0.436)	0.117 (0.414)	0.0887 (0.532)	0.235 (0.597)	0.349 (0.507)	0.319 (0.495)
Upper school degree (grandf.)	0.0430 (0.136)	0.0188 (0.135)	-0.285* (0.143)	-0.290* (0.142)	0.170 (0.186)	0.171 (0.183)
Children j6 in Kita	0.138 (0.120)	0.119 (0.124)	0.0402 (0.127)	0.0253 (0.129)	-0.127 (0.165)	-0.0912 (0.159)
Age youngest child	-0.00482 (0.00636)	-0.00430 (0.00674)	-0.0108 (0.00661)	-0.00757 (0.00672)	0.00170 (0.00795)	0.000380 (0.00842)
Children's mean health	0.198* (0.0975)	0.190* (0.0969)	0.135 (0.109)	0.139 (0.108)	0.380** (0.133)	0.397** (0.135)
Constant	5.756*** (1.049)	5.706*** (1.091)	5.064*** (0.966)	4.846*** (1.060)	3.085* (1.484)	4.025** (1.473)
Observations	1880	1847	1881	1848	1085	1077

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.
Source: Pairfam (2009-2019), weighted, own calculation.

Table E.23: Regression table: Fathers' satisfaction with contacts, relationship and work-life balance (Age: 3-5.5 years)

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS: Contacts	IV: Contacts	OLS: Relationship	IV: Relationship	OLS: Work-life balance	IV: Work-life balance
Grandparental care	0.0195 (0.117)	0.271 (0.515)	0.116 (0.117)	-0.278 (0.477)	-0.246 (0.168)	-1.543* (0.677)
No / lower school degree	-0.332 (0.263)	-0.246 (0.264)	0.0235 (0.328)	0.144 (0.330)	-0.285 (0.429)	-0.132 (0.429)
University degree	-0.210 ⁺ (0.124)	-0.202 (0.123)	-0.0352 (0.134)	-0.0224 (0.135)	0.0912 (0.187)	0.132 (0.196)
Working part-time	0.733 ⁺ (0.405)	0.702 ⁺ (0.403)	-0.666 (0.405)	-0.653 ⁺ (0.395)	1.924* (0.864)	1.872* (0.858)
Working full-time	0.534 ⁺ (0.292)	0.536 ⁺ (0.292)	-0.504 ⁺ (0.287)	-0.432 (0.282)	0.679 (0.775)	0.735 (0.767)
Partner working part-time	0.117 (0.131)	0.0613 (0.151)	-0.245 ⁺ (0.134)	-0.177 (0.150)	0.0491 (0.197)	0.209 (0.216)
Partner working full-time	0.229 (0.167)	0.236 (0.166)	-0.182 (0.162)	-0.119 (0.168)	0.0494 (0.270)	0.141 (0.284)
Migrational background	-0.0760 (0.256)	-0.0453 (0.253)	0.380 ⁺ (0.210)	0.320 (0.207)	1.569*** (0.444)	1.625*** (0.429)
log(income) in 1000â¬	0.240 (0.175)	0.260 (0.172)	0.692*** (0.164)	0.648*** (0.161)	0.335 (0.236)	0.404 ⁺ (0.242)
Age	-0.0477*** (0.0129)	-0.0487*** (0.0128)	-0.0331** (0.0126)	-0.0316* (0.0126)	-0.0134 (0.0181)	-0.00530 (0.0187)
Emotional closeness with parents	0.137 ⁺ (0.0735)	0.148 ⁺ (0.0834)	0.200** (0.0747)	0.257** (0.0789)	-0.106 (0.104)	0.00450 (0.122)
Children's sex	0.0111 (0.0645)	0.00130 (0.0640)	-0.293*** (0.0790)	-0.286*** (0.0779)	-0.194 ⁺ (0.103)	-0.177 ⁺ (0.104)
Nr. children 0-2	-0.310 (0.189)	-0.337 ⁺ (0.187)	-0.254 (0.194)	-0.218 (0.188)	-0.602* (0.271)	-0.468 ⁺ (0.280)
Nr. children 3-5.5	-0.315 (0.197)	-0.354 ⁺ (0.195)	0.163 (0.200)	0.152 (0.194)	-0.162 (0.339)	-0.108 (0.345)
Nr. children 5.5-10	-0.0176 (0.0994)	-0.0176 (0.0992)	0.0676 (0.109)	0.0513 (0.109)	-0.499** (0.154)	-0.571*** (0.159)
Nr. other children	0.123 (0.0964)	0.164 ⁺ (0.0970)	-0.108 (0.107)	-0.0986 (0.111)	-0.191 (0.117)	-0.263* (0.132)
Health	0.208** (0.0673)	0.202** (0.0671)	0.202** (0.0667)	0.188** (0.0651)	0.423*** (0.0960)	0.428*** (0.0945)
Obesity	-0.0378 (0.145)	-0.0169 (0.146)	-0.152 (0.153)	-0.177 (0.154)	-0.0387 (0.227)	-0.130 (0.232)
Pregnant	-0.143 (0.230)	-0.158 (0.227)	0.290 (0.230)	0.336 (0.223)	-0.127 (0.339)	-0.0393 (0.367)
Cohabitation with partner	-0.510 (0.377)	-0.617 (0.395)	1.018* (0.451)	0.917* (0.458)	0.188 (0.585)	0.369 (0.591)
Single child	0.161 (0.201)	0.195 (0.198)	-0.290 (0.183)	-0.311 ⁺ (0.185)	0.0508 (0.308)	0.158 (0.341)
No school degree (grandm.)	0.576 (0.433)	0.836 ⁺ (0.469)	1.424*** (0.427)	1.372** (0.441)	1.576** (0.527)	1.748** (0.659)
Upper school degree (grandm.)	0.173 (0.163)	0.166 (0.167)	0.268 ⁺ (0.148)	0.270 ⁺ (0.146)	-0.148 (0.238)	-0.160 (0.234)
No school degree (grandf.)	0.440 (0.438)	0.243 (0.457)	-0.0641 (0.398)	-0.0564 (0.402)	-0.0657 (0.596)	-0.192 (0.672)
Upper school degree (grandf.)	0.104 (0.140)	0.103 (0.140)	-0.267 ⁺ (0.142)	-0.248 ⁺ (0.138)	0.285 (0.204)	0.354 ⁺ (0.202)
Children j6 in Kita	0.110 (0.123)	0.128 (0.123)	0.149 (0.136)	0.141 (0.133)	0.0256 (0.187)	-0.0360 (0.199)
Age youngest child	0.00333 (0.00456)	0.00313 (0.00459)	-0.00436 (0.00484)	-0.00473 (0.00486)	0.000587 (0.00667)	0.000163 (0.00678)
Children's mean health	0.181 ⁺ (0.102)	0.145 (0.100)	0.127 (0.0982)	0.132 (0.0975)	0.0170 (0.143)	-0.0102 (0.145)
Constant	6.826*** (1.112)	7.158*** (1.112)	5.937*** (1.011)	5.760*** (1.012)	1.950 (1.509)	1.295 (1.533)
Observations	1813	1794	1811	1792	1018	1012

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.
Source: Pairfam (2009-2019), weighted, own calculation.

Table E.24: Regression table: Fathers' satisfaction with contacts, relationship and work-life balance (Age: 5.5-10 years)

	(1) OLS: Contacts	(2) IV: Contacts	(3) OLS: Relationship	(4) IV: Relationship	(5) OLS: Work-life balance	(6) IV: Work-life balance
Grandparental care	-0.103 (0.103)	1.208* (0.552)	0.00322 (0.116)	0.0997 (0.623)	-0.303* (0.154)	-1.006 (0.637)
No / lower school degree	-0.103 (0.258)	-0.00625 (0.265)	-0.0108 (0.343)	0.157 (0.363)	-0.461 (0.417)	-0.443 (0.417)
University degree	0.0118 (0.107)	-0.00882 (0.112)	-0.0385 (0.141)	-0.0528 (0.142)	-0.293+ (0.164)	-0.269 (0.167)
Working part-time	0.821* (0.391)	0.746+ (0.389)	-0.111 (0.448)	-0.188 (0.449)	0.817 (0.697)	0.777 (0.584)
Working full-time	0.498+ (0.287)	0.515+ (0.272)	-0.581+ (0.339)	-0.625+ (0.338)	-0.328 (0.591)	-0.414 (0.481)
Partner working part-time	-0.0718 (0.125)	-0.241+ (0.140)	-0.0669 (0.145)	-0.0960 (0.159)	-0.108 (0.196)	-0.0477 (0.211)
Partner working full-time	0.0413 (0.144)	-0.0496 (0.148)	-0.0642 (0.174)	-0.0953 (0.177)	-0.118 (0.233)	-0.110 (0.233)
No partner	2.634*** (0.512)	3.046*** (0.716)	2.292** (0.760)	2.518** (0.847)	2.824*** (0.832)	2.173* (1.025)
Migrational background	0.0787 (0.234)	0.0114 (0.240)	0.560* (0.279)	0.416 (0.280)	0.323 (0.288)	0.400 (0.306)
log(income) in 1000â¬	-0.0446 (0.134)	-0.0324 (0.145)	0.583*** (0.143)	0.587*** (0.140)	0.152 (0.202)	0.148 (0.201)
Age	-0.0119 (0.0135)	-0.00773 (0.0139)	-0.0318* (0.0161)	-0.0279+ (0.0159)	0.0129 (0.0170)	0.0130 (0.0171)
Emotional closeness with parents	0.157* (0.0630)	0.0581 (0.0793)	0.144* (0.0730)	0.159+ (0.0865)	0.0986 (0.0878)	0.147 (0.0994)
Children's sex	0.0545 (0.0600)	0.0536 (0.0621)	-0.162* (0.0772)	-0.161* (0.0769)	0.0164 (0.0914)	0.0227 (0.0895)
Nr. children 0-2	-0.564** (0.184)	-0.585** (0.188)	-0.380+ (0.227)	-0.400+ (0.222)	-0.0860 (0.301)	-0.159 (0.303)
Nr. children 3-5.5	-0.493* (0.199)	-0.495* (0.203)	-0.174 (0.214)	-0.182 (0.210)	-0.487 (0.343)	-0.515 (0.337)
Nr. children 5.5-10	-0.253* (0.106)	-0.218* (0.110)	-0.0351 (0.140)	-0.0338 (0.140)	-0.204 (0.155)	-0.239 (0.154)
Nr. other children	-0.0906 (0.0705)	-0.0258 (0.0766)	0.0809 (0.0862)	0.113 (0.0887)	-0.118 (0.102)	-0.147 (0.105)
Health	0.215*** (0.0582)	0.197** (0.0603)	0.206** (0.0662)	0.175** (0.0650)	0.472*** (0.0818)	0.484*** (0.0797)
Obesity	0.157 (0.125)	0.258* (0.131)	-0.0791 (0.156)	-0.0337 (0.153)	-0.164 (0.180)	-0.200 (0.177)
Pregnant	-0.0144 (0.268)	0.0142 (0.267)	0.0348 (0.373)	0.0426 (0.372)	0.932* (0.394)	0.865* (0.380)
Cohabitation with partner	0.0451 (0.279)	0.192 (0.288)	0.460 (0.485)	0.492 (0.488)	0.902+ (0.498)	0.798 (0.516)
Single child	0.192 (0.157)	0.197 (0.155)	-0.283 (0.178)	-0.309+ (0.175)	-0.131 (0.205)	-0.124 (0.203)
No school degree (grandm.)	0.200 (0.394)	0.368 (0.408)	0.472 (0.554)	0.192 (0.553)	1.566** (0.599)	1.654** (0.615)
Upper school degree (grandm.)	-0.250 (0.155)	-0.247 (0.159)	0.222 (0.187)	0.224 (0.184)	0.00288 (0.205)	0.0310 (0.203)
No school degree (grandf.)	0.268 (0.345)	0.278 (0.360)	0.150 (0.430)	0.410 (0.436)	-1.105+ (0.654)	-1.146+ (0.655)
Upper school degree (grandf.)	0.170 (0.127)	0.208 (0.131)	-0.149 (0.165)	-0.130 (0.165)	0.00252 (0.174)	-0.0167 (0.175)
Children j6 in Kita	0.142 (0.170)	0.168 (0.174)	0.0579 (0.178)	0.0642 (0.175)	0.344 (0.284)	0.354 (0.280)
Age youngest child	0.000423 (0.00220)	0.000415 (0.00232)	-0.00233 (0.00310)	-0.00246 (0.00307)	0.000627 (0.00385)	-0.000332 (0.00402)
Children's mean health	0.0729 (0.0844)	0.0366 (0.0871)	0.0176 (0.106)	0.0429 (0.105)	0.131 (0.125)	0.136 (0.124)
Constant	6.328*** (1.092)	6.381*** (1.089)	7.568*** (1.121)	7.405*** (1.108)	1.936 (1.535)	2.009 (1.490)
Observations	2209	2189	2207	2187	1305	1299

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table E.25: Regression table: Fathers' satisfaction with contacts, relationship and work-life balance

	(1) OLS: Contacts	(2) IV: Contacts	(3) OLS: Relationship	(4) IV: Relationship	(5) OLS: Work-life balance	(6) IV: Work-life balance
Grandparental care	-0.0928 (0.0725)	0.266 (0.342)	-0.0118 (0.0778)	-0.375 (0.371)	-0.205+ (0.106)	-0.408 (0.425)
No / lower school degree	-0.174 (0.170)	-0.0897 (0.172)	0.0937 (0.196)	0.199 (0.200)	-0.386 (0.236)	-0.386 (0.237)
University degree	-0.107 (0.0755)	-0.107 (0.0767)	0.0450 (0.0912)	0.0569 (0.0927)	0.0301 (0.117)	0.0199 (0.118)
Working part-time	0.365 (0.250)	0.398 (0.249)	-0.173 (0.251)	-0.239 (0.253)	1.166* (0.504)	1.038* (0.508)
Working full-time	0.321+ (0.189)	0.331+ (0.192)	-0.398* (0.189)	-0.436* (0.191)	0.237 (0.458)	0.105 (0.464)
Partner working part-time	0.0807 (0.0864)	0.0108 (0.0992)	-0.196* (0.0963)	-0.159 (0.108)	0.0802 (0.126)	0.0884 (0.138)
Partner working full-time	0.173 (0.107)	0.145 (0.110)	-0.100 (0.110)	-0.0861 (0.116)	0.163 (0.155)	0.153 (0.157)
No partner	2.530*** (0.376)	2.400*** (0.397)	1.921*** (0.502)	1.783*** (0.511)	2.506*** (0.586)	2.309*** (0.612)
Migrational background	0.0263 (0.158)	0.0268 (0.158)	0.224 (0.179)	0.179 (0.180)	0.801*** (0.236)	0.776** (0.239)
log(income) in 1000â¬	0.100 (0.102)	0.0927 (0.104)	0.436*** (0.103)	0.455*** (0.103)	0.0896 (0.150)	0.124 (0.150)
Age	-0.0200* (0.00837)	-0.0195* (0.00840)	-0.0185* (0.00892)	-0.0188* (0.00894)	-0.00246 (0.0110)	-0.000873 (0.0111)
Emotional closeness with parents	0.170*** (0.0450)	0.151** (0.0497)	0.223*** (0.0484)	0.272*** (0.0526)	0.0206 (0.0619)	0.0241 (0.0688)
Children's sex	-0.0120 (0.0462)	-0.0261 (0.0465)	-0.143** (0.0540)	-0.136* (0.0538)	-0.0531 (0.0665)	-0.0405 (0.0668)
Nr. children 0-2	-0.534*** (0.115)	-0.587*** (0.118)	-0.143 (0.120)	-0.0994 (0.126)	-0.430* (0.176)	-0.425* (0.183)
Nr. children 3-5.5	-0.519*** (0.111)	-0.539*** (0.112)	-0.227+ (0.128)	-0.217+ (0.127)	-0.322+ (0.177)	-0.343+ (0.177)
Nr. children 5.5-10	-0.208** (0.0640)	-0.206** (0.0642)	-0.0584 (0.0765)	-0.0626 (0.0762)	-0.261** (0.0915)	-0.276** (0.0918)
Nr. other children	-0.0353 (0.0548)	-0.00204 (0.0578)	0.0611 (0.0634)	0.0698 (0.0667)	-0.179* (0.0737)	-0.192* (0.0786)
Health	0.239*** (0.0411)	0.218*** (0.0418)	0.249*** (0.0457)	0.241*** (0.0461)	0.401*** (0.0590)	0.401*** (0.0589)
Obesity	0.0260 (0.0922)	0.0620 (0.0923)	-0.0251 (0.106)	-0.0281 (0.106)	-0.110 (0.135)	-0.123 (0.137)
Pregnant	-0.125 (0.134)	-0.171 (0.137)	0.0267 (0.169)	0.0658 (0.167)	-0.0752 (0.216)	-0.0702 (0.218)
Cohabitation with partner	-0.201 (0.220)	-0.112 (0.227)	0.561* (0.264)	0.465 (0.283)	0.340 (0.361)	0.229 (0.367)
Single child	0.152 (0.129)	0.162 (0.128)	-0.248* (0.120)	-0.272* (0.122)	-0.273 (0.176)	-0.220 (0.179)
No school degree (grandm.)	0.170 (0.284)	0.412 (0.275)	0.647+ (0.366)	0.614 (0.397)	1.821*** (0.372)	1.781*** (0.391)
Upper school degree (grandm.)	0.0431 (0.106)	0.00201 (0.107)	0.0781 (0.111)	0.102 (0.112)	-0.0474 (0.145)	-0.0580 (0.145)
No school degree (grandf.)	0.252 (0.265)	0.108 (0.260)	0.306 (0.344)	0.375 (0.368)	-0.455 (0.434)	-0.517 (0.445)
Upper school degree (grandf.)	0.0200 (0.0877)	0.0369 (0.0880)	-0.112 (0.0967)	-0.118 (0.0972)	0.105 (0.118)	0.120 (0.118)
Children j6 in Kita	0.121 (0.0906)	0.130 (0.0917)	0.0124 (0.0994)	0.0140 (0.0991)	0.121 (0.139)	0.126 (0.139)
Age youngest child	-0.000850 (0.00160)	-0.00153 (0.00161)	-0.00213 (0.00193)	-0.00185 (0.00194)	0.0000194 (0.00256)	-0.000350 (0.00256)
Children's mean health	0.128* (0.0608)	0.127* (0.0608)	0.0516 (0.0695)	0.0460 (0.0699)	0.149+ (0.0871)	0.144 (0.0876)
Constant	5.875*** (0.679)	5.975*** (0.693)	6.610*** (0.667)	6.557*** (0.682)	1.991+ (1.025)	2.222* (1.030)
Observations	4516	4458	4513	4455	2651	2632

Note: Robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

F Instrument: Distance to parents-in-law

Table F.26: Results: Mothers' satisfaction with child care, general life, education and leisure (using only distance to parents-in-law)

	OLS: Child care (1)	IV: Child care (2)	OLS: General (3)	IV: General (4)	OLS: Educ./career (5)	IV: Educ./career (6)	OLS: Leisure (7)	IV: Leisure (8)
Scale: 0-10								
(a) Age: 0-2 years								
Grandparental care	0.0280 (0.240)	3.868 (4.797)	-0.0871 (0.0853)	-0.503 (0.547)	0.0747 (0.119)	0.229 (0.680)	0.195 (0.134)	1.850* (0.819)
Observations	764	435	2052	1124	1971	1081	2052	1124
F-Statistic		1.456		41.598		41.68		41.598
Mean	8.536	8.536	8.001	8.001	7.243	7.243	6.133	6.133
(b) Age: 3-5.5 years								
Grandparental care	0.195 (0.154)	4.482+ (2.636)	0.0623 (0.0828)	0.408 (0.347)	0.200+ (0.103)	0.369 (0.579)	0.0124 (0.118)	-0.223 (0.592)
Observations	1496	809	2297	1189	2243	1164	2296	1189
F-Statistic		5.855		666.389		64.408		66.389
Mean	8.365	8.365	7.899	7.899	7.300	7.300	6.293	6.293
(c) Age: 5.5-10 years								
Grandparental care	0.0609 (0.111)	1.636+ (0.922)	0.0389 (0.0715)	0.526 (0.436)	0.0411 (0.0934)	0.502 (0.577)	-0.125 (0.101)	1.184+ (0.622)
Observations	2925	1436	3242	1597	3190	1570	3243	1598
F-Statistic		16.891		72.603		71.329		72.405
Mean	8.42	8.42	7.829	7.829	7.292	7.292	6.470	6.470
(d) Age: 0-10 years								
Grandparental care	0.0776 (0.102)	2.324* (1.120)	-0.0173 (0.0504)	0.198 (0.302)	0.118+ (0.0678)	0.406 (0.393)	-0.0200 (0.0738)	1.141** (0.434)
Observations	5556	3002	6066	3005	5944	2945	6066	3006
F-Statistic		16.423		141.085		142.426		140.861
Mean	8.365	8.365	7.893	7.893	7.295	7.295	6.415	6.415

Note: Robust standard errors in parentheses. For the outcome "Child care", robust standard errors clustered at the household level. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Child care: satisfaction with the child care situation on child level, all other (outcomes on parental level), General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (c) for the outcome "Child care" and (d) for all other outcomes in the appendix. *Source:* Pairfam (2009-2019), weighted, own calculation.

Table F.27: Results: Mothers' satisfaction with contacts, relationship and work-life balance (using only distance to parents-in-law)

	OLS: Contacts (1)	IV: Contacts (2)	OLS: Relationship (3)	IV: Relationship (4)	OLS: Work-life balance (5)	IV: Work-life balance (6)
Scale: 0-10						
(a) Age: 0-2 years						
Grandparental care	-0.0326 (0.116)	0.736 (0.681)	0.120 (0.118)	-0.00755 (0.561)	-0.308 (0.244)	-1.587 (1.004)
Observations	2052	1124	1960	1123	535	298
F-Statistic		41.598		41.586		18.771
Mean	7.217	7.217	7.909	7.909	6.516	6.516
(b) Age: 3-5.5 years						
Grandparental care	-0.0748 (0.108)	0.696 (0.512)	-0.0149 (0.118)	0.511 (0.550)	-0.108 (0.182)	2.068 ⁺ (1.215)
Observations	2297	1189	2170	1184	917	484
F-Statistic		66.389		65.715		17.058
Mean	7.317	7.317	7.654	7.654	6.389	6.389
(c) Age: 5.5-10 years						
Grandparental care	-0.00387 (0.0941)	1.087* (0.549)	0.174 (0.107)	0.610 (0.575)	-0.370* (0.153)	0.0940 (0.747)
Observations	3243	1598	2977	1593	1557	783
F-Statistic		72.405		71.738		50.479
Mean	7.327	7.327	7.578	7.578	6.470	6.470
(d) Age: 0-10 years						
Grandparental care	-0.0465 (0.0674)	0.900* (0.390)	0.0771 (0.0736)	0.700 ⁺ (0.385)	-0.255* (0.115)	0.168 (0.568)
Observations	6067	3006	5616	2999	2586	1281
F-Statistic		140.861		140.29		88.591
Mean	7.325	7.325	7.713	7.713	6.551	6.551

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table F.28: Results: Fathers' satisfaction with child care, general life, education and leisure (using only distance to parents-in-law)

	OLS: Child care (1)	IV: Child care (2)	OLS: General (3)	IV: General (4)	OLS: Educ./career (5)	IV: Educ./career (6)	OLS: Leisure (7)	IV: Leisure (8)
Scale: 0-10								
(a) Age: 0-2 years								
Grandparental care	0.140 (0.233)	-0.859 (1.233)	0.118 (0.0764)	0.318 (0.373)	0.147 (0.103)	-0.0539 (0.448)	-0.117 (0.121)	-0.673 (0.510)
Observations	621	473	1879	1285	1877	1284	1878	1286
F-Statistic		6.694		76.138		76.659		76.524
Mean	8.733	8.733	7.873	7.873	7.512	7.512	6.369	6.369
(b) Age: 3-5.5 years								
Grandparental care	0.394* (0.171)	0.632 (0.636)	0.0922 (0.0793)	0.646+ (0.392)	-0.00121 (0.107)	-0.0583 (0.473)	-0.0312 (0.118)	-0.946+ (0.507)
Observations	1139	840	1811	1256	1809	1255	1808	1255
F-Statistic		30.622		69.514		69.583		70.016
Mean	8.365	8.365	7.716	7.716	7.528	7.528	6.344	6.344
(c) Age: 5.5-10 years								
Grandparental care	0.291* (0.128)	1.531* (0.720)	0.0535 (0.0755)	0.0229 (0.357)	-0.0713 (0.0896)	-0.317 (0.400)	-0.151 (0.105)	-0.595 (0.462)
Observations	2010	1482	2204	1542	2203	1542	2204	1542
F-Statistic		28.191		88.115		88.099		88.506
Mean	8.514	8.514	7.696	7.696	7.5188	7.5188	6.613	6.613
(d) Age: 0-10 years								
Grandparental care	0.312** (0.118)	1.061+ (0.618)	0.0254 (0.0494)	0.265 (0.241)	0.0323 (0.0669)	-0.0601 (0.297)	-0.128+ (0.0748)	-0.398 (0.330)
Observations	4216	3128	4506	3090	4501	3088	4504	3091
F-Statistic		30.572		181.44		182.1938		182.355
Mean	8.365	8.365	7.80	7.80	7.522	7.5228	6.560	6.560

Note: Robust standard errors in parentheses. For the outcome "Child care", robust standard errors clustered at the household level. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Child care: satisfaction with the child care situation on child level, all other (outcomes on parental level), General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (c) for the outcome "Child care" and (d) for all other outcomes in the appendix. *Source:* Pairfam (2009-2019), weighted, own calculation.

Table F.29: Results: Fathers' satisfaction with contacts, relationship and work-life balance (using only distance to parents-in-law)

	OLS: Contacts (1)	IV: Contacts (2)	OLS: Relationship (3)	IV: Relationship (4)	OLS: Work-life balance (5)	IV: Work-life balance (6)
Scale: 0-10						
(a) Age: 0-2 years						
Grandparental care	-0.119 (0.116)	-1.058 ⁺ (0.550)	-0.0840 (0.119)	0.165 (0.580)	0.0251 (0.161)	-0.108 (0.832)
Observations	1877	1285	1878	1285	1082	714
F-Statistic		76.439		76.240		35.446
Mean	6.711	6.711	7.755	7.755	5.973	5.973
(b) Age: 3-5.5 years						
Grandparental care	0.0158 (0.117)	0.0107 (0.543)	0.115 (0.117)	1.248* (0.560)	-0.252 (0.168)	-0.515 (0.578)
Observations	1809	1256	1807	1255	1017	706
F-Statistic		69.514		69.433		72.466
Mean	6.642	6.642	7.587	7.587	5.838	5.838
(c) Age: 5.5-10 years						
Grandparental care	-0.0977 (0.103)	0.364 (0.474)	0.00112 (0.116)	1.072 ⁺ (0.572)	-0.303* (0.154)	-0.142 (0.591)
Observations	2203	1542	2201	1540	1304	923
F-Statistic		87.946		87.946		70.359
Mean	6.900	6.900	7.661	7.661	5.926	5.926
(d) Age: 0-10 years						
Grandparental care	-0.0883 (0.0725)	-0.0710 (0.357)	-0.0126 (0.0781)	0.649 ⁺ (0.389)	-0.208* (0.106)	-0.205 (0.440)
Observations	4504	3091	4501	3088	2646	1815
F-Statistic		181.883		184.187		145.037
Mean	6.870	6.870	7.692	7.692	5.942	5.942

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

G Outcomes for childless sample

Table G.30: Regression table: Mother's Satisfaction (individuals without children)

	(1) OLS:General	(2) OLS: Education, Career	(3) OLS: Leisure	(4) OLS:Contacts	(5) OLS: Relationship	(6) OLS:Work-life Balance
Distanz < 30min	-0.237 ⁺ (0.138)	0.0163 (0.176)	0.0527 (0.187)	0.254 (0.168)	-0.140 (0.239)	0.139 (0.386)
No / lower school degree	0.00815 (0.403)	-0.780 ⁺ (0.420)	0.0704 (0.447)	-0.480 (0.331)	0.946* (0.463)	0.517 (1.041)
University degree	0.149 (0.171)	0.00104 (0.193)	0.210 (0.211)	-0.0690 (0.158)	0.471 ⁺ (0.245)	0.191 (0.429)
Working part-time	0.0121 (0.319)	1.221* (0.478)	0.274 (0.345)	-0.154 (0.328)	-0.487 (0.380)	-0.105 (2.117)
Working full-time	0.0232 (0.271)	1.166* (0.459)	0.150 (0.280)	-0.00357 (0.265)	-0.0729 (0.305)	1.075 (2.047)
Partner working part-time	-0.450 (0.577)	0.704 (0.598)	0.546 (0.595)	0.242 (0.527)	0.996 (0.746)	1.021 (1.552)
Partner working full-time	-0.0548 (0.299)	-0.160 (0.332)	0.398 (0.419)	0.270 (0.286)	0.826 ⁺ (0.442)	0.772 (0.611)
No partner	-0.734* (0.368)	-0.0197 (0.407)	0.512 (0.478)	0.0420 (0.401)		1.472 (0.967)
Migrational background	-0.00688 (0.281)	-0.431 (0.406)	-1.061* (0.494)	0.397 (0.283)	0.553 (0.354)	-1.177 (0.760)
log(income) in 1000â¬	0.444* (0.199)	0.662** (0.225)	0.0871 (0.215)	-0.0452 (0.205)	0.209 (0.244)	-0.988 ⁺ (0.506)
Age	0.0328 (0.0210)	-0.0131 (0.0202)	0.0469* (0.0204)	0.0220 (0.0196)	0.0458 (0.0337)	-0.0294 (0.0473)
Emotional closeness with parents	0.253** (0.0899)	0.222 ⁺ (0.118)	0.314* (0.122)	0.389*** (0.108)	0.0981 (0.132)	-0.159 (0.220)
Nr. other children	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Health	0.448*** (0.0846)	0.471*** (0.0875)	0.383*** (0.0949)	0.212* (0.0823)	-0.0449 (0.0950)	0.446* (0.192)
Obesity	-0.222 (0.214)	0.400 (0.291)	-1.001** (0.333)	-1.243*** (0.291)	0.0737 (0.268)	0.484 (0.521)
Pregnant	0.685*** (0.157)	0.245 (0.194)	-0.121 (0.234)	0.121 (0.175)	-0.127 (0.263)	0.518 (0.417)
Partnership existent	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Cohabitation with partner	-0.0952 (0.210)	-0.523* (0.255)	0.228 (0.260)	0.246 (0.242)	0.252 (0.288)	1.433* (0.628)
Single child	0.500** (0.178)	0.572* (0.252)	0.240 (0.279)	0.0265 (0.268)	0.695** (0.262)	1.686*** (0.459)
No school degree (grandm.)	-0.498 (0.585)	-0.492 (0.871)	-0.190 (0.701)	-0.430 (0.661)	3.609*** (1.040)	-3.069* (1.347)
Upper school degree (grandm.)	-0.144 (0.148)	0.0331 (0.202)	-0.0536 (0.215)	-0.239 (0.195)	0.250 (0.212)	0.505 (0.453)
No school degree (grandf.)	0.581 (0.529)	1.219 (0.869)	-0.00478 (0.549)	-0.488 (0.568)	-4.566** (1.625)	
Upper school degree (grandf.)	0.241 (0.156)	0.365 ⁺ (0.190)	-0.0278 (0.205)	-0.237 (0.186)	0.203 (0.235)	-0.761 (0.483)
Constant	3.991** (1.375)	1.842 (1.925)	1.117 (1.268)	3.449** (1.255)	5.473* (2.374)	2.753 (3.682)
Observations	691	691	692	691	620	259

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix except for child level variables. Source: Pairfam (2009-2019), weighted, own calculation.

Table G.31: Regression table: Father's Satisfaction (individuals without children)

	(1) OLS:General	(2) OLS: Education, Career	(3) OLS: Leisure	(4) OLS:Contacts	(5) OLS: Relationship	(6) OLS:Work-life Balance
Distanz < 30min	0.182 (0.135)	-0.135 (0.212)	0.256 (0.175)	0.299 ⁺ (0.166)	-0.115 (0.156)	-0.0302 (0.371)
No / lower school degree	-0.182 (0.240)	-0.751 (0.462)	-0.122 (0.388)	0.276 (0.337)	0.420 (0.356)	0.331 (0.665)
University degree	0.119 (0.109)	0.239 ⁺ (0.144)	0.0711 (0.186)	0.0456 (0.160)	-0.0676 (0.165)	0.334 (0.318)
Working part-time	1.408** (0.456)	1.666** (0.579)	-0.00924 (0.690)	0.151 (0.459)	-0.198 (0.688)	2.304 (1.623)
Working full-time	0.829* (0.398)	0.389 (0.544)	0.0161 (0.542)	0.332 (0.394)	0.223 (0.385)	1.339 (0.942)
Partner working part-time	0.00893 (0.210)	0.00997 (0.323)	-0.0364 (0.275)	0.0618 (0.252)	-0.178 (0.279)	-0.396 (0.689)
Partner working full-time	0.218 (0.173)	0.435 (0.273)	0.104 (0.252)	0.294 (0.194)	-0.0154 (0.216)	0.158 (0.491)
Migrational background	0.0341 (0.232)	-0.401 (0.396)	0.328 (0.357)	0.113 (0.327)	-0.294 (0.312)	1.768 (1.225)
log(income) in 1000â¬	0.199 (0.201)	0.265 (0.227)	0.0503 (0.273)	-0.297 (0.189)	0.104 (0.182)	0.0291 (0.414)
3 2010/11	-0.806 ⁺ (0.442)	-0.140 (0.400)	0.601 (0.852)	1.049 (1.456)	-0.392 (0.504)	
4 2011/12	-0.759 ⁺ (0.437)	-0.433 (0.442)	-0.0274 (0.879)	0.664 (1.458)	-0.369 (0.487)	
5 2012/13	-0.783 ⁺ (0.425)	-0.566 (0.414)	0.181 (0.856)	1.108 (1.452)	-0.712 (0.485)	
6 2013/14	-1.035* (0.434)	-0.675 ⁺ (0.398)	0.111 (0.851)	0.906 (1.453)	-0.729 (0.479)	0.762 (1.101)
7 2014/15	-0.737 ⁺ (0.422)	-0.368 (0.381)	0.175 (0.850)	1.010 (1.455)	-0.494 (0.470)	0.444 (1.062)
8 2015/16	-0.958* (0.428)	-0.768* (0.372)	0.0929 (0.843)	0.908 (1.452)	-0.582 (0.473)	0.0162 (1.064)
9 2016/17	-1.022* (0.421)	-0.549 (0.402)	0.240 (0.849)	0.943 (1.462)	-0.405 (0.467)	0.269 (1.080)
10 2017/18	-0.881* (0.417)	-0.774* (0.363)	-0.246 (0.853)	0.0659 (1.500)	-0.578 (0.529)	-0.581 (1.145)
11 2018/19	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Age	0.00477 (0.0132)	0.0211 (0.0181)	0.0200 (0.0225)	0.00240 (0.0181)	0.0189 (0.0180)	0.0958** (0.0305)
Emotional closeness with parents	0.122 (0.0769)	0.0819 (0.107)	0.0962 (0.122)	0.257** (0.0946)	-0.00556 (0.0962)	-0.0415 (0.170)
Nr. other children	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Health	0.384*** (0.0706)	0.143 (0.0959)	0.254** (0.0937)	0.229** (0.0794)	0.172 ⁺ (0.0892)	0.285* (0.143)
Obesity	-0.116 (0.169)	0.200 (0.247)	0.761*** (0.199)	0.575** (0.207)	-0.700* (0.281)	-0.0487 (0.409)
Pregnant	0.285* (0.125)	0.299 ⁺ (0.167)	0.214 (0.185)	0.245 (0.168)	0.267 ⁺ (0.147)	0.189 (0.323)
Partnership existent	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Cohabitation with partner	0.373* (0.186)	0.352 ⁺ (0.191)	-0.471 ⁺ (0.271)	0.116 (0.211)	0.202 (0.204)	-0.00135 (0.411)
Widowed	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Single child	-0.170 (0.163)	-0.172 (0.223)	-0.428 (0.305)	-0.191 (0.226)	-0.292 (0.220)	0.290 (0.469)
No school degree (grandm.)	0.411 (0.397)	-1.005 (0.971)	-0.0552 (0.867)	-0.00920 (0.634)	1.200* (0.499)	-2.732 (2.645)
Upper school degree (grandm.)	-0.0777 (0.147)	-0.442* (0.197)	-0.0645 (0.212)	0.224 (0.191)	0.399 ⁺ (0.211)	-0.228 (0.416)
No school degree (grandf.)	-0.522 (0.317)	-0.349 (0.578)	0.680 (0.499)	0.402 (0.485)	0.333 (0.434)	-0.0837 (1.763)
Upper school degree (grandf.)	0.0884 (0.130)	0.529** (0.173)	0.457** (0.175)	0.281 ⁺ (0.164)	-0.228 (0.173)	0.532 (0.354)
Constant	4.797*** (1.056)	5.579*** (1.376)	2.767 ⁺ (1.634)	2.024 (1.933)	7.717*** (1.491)	-7.231** (2.337)
Observations	786	783	784	784	782	321

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix except for child level variables. Source: Pairfam (2009-2019), weighted, own calculation.

H Results with different age group definition

Table H.32: Results: Child health problems

	OLS: General Health (1)	IV: General Health (2)	OLS: Chronic dis. (3)	IV: Chronic dis. (4)
	Scale: 1-5		Dummy variable	
Age: 0-2 years				
Grandparental care	0.0380 (0.0477)	0.413 (0.290)	-0.0128 (0.0169)	0.0473 (0.0940)
Observations	1891	1875	2334	2309
F-Statistic		62.208		67.184
Mean	1.560	1.560	0.081	0.081
Age: 3-5 years				
Grandparental care	0.0238 (0.0401)	0.289 (0.184)	-0.0282 ⁺ (0.0160)	-0.159 ⁺ (0.0918)
Observations	3126	3105	3715	3682
F-Statistic		89.494		106.183
Mean	1.569	1.569	0.124	0.124
Age: 6-10 years				
Grandparental care	0.0644 ⁺ (0.0336)	0.398 ^{**} (0.152)	-0.0126 (0.0176)	-0.0675 (0.0905)
Observations	6044	6007	6723	6681
F-Statistic		128.882		137.339
Mean	1.579	1.579	0.124	0.159

Note: Robust standard errors clustered at the household level in parentheses. ⁺ $p < 0.10$, ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$.

The general health problems variable is an ordinal variable on a scale from 1 (good health) to 5 (bad health).

The chronic diseases variable is a binary variable which equals 1 for children with a chronic disease and 0 otherwise.

The regressions include the control variables listed in table B.1 column (a) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table H.33: Results: Mothers' satisfaction with child care, general life, education and leisure

	OLS: Child care (1)	IV: Child care (2)	OLS: General (3)	IV: General (4)	OLS: Educ./career (5)	IV: Educ./career (6)	OLS: Leisure (7)	IV: Leisure (8)
Scale: 0-10								
Age: 0-2 years								
Grandparental care	0.0825 (0.243)	2.388 ⁺ (1.265)	-0.0763 (0.0848)	0.117 (0.409)	0.0860 (0.119)	0.187 (0.521)	0.192 (0.135)	0.979 (0.600)
Observations	764	757	2050	2025	1969	1945	2050	2025
F-Statistic		20.284		97.436		97.068		97.436
Mean	8.546	8.546	7.936	7.936	7.1421	7.1421	6.030	6.030
Age: 3-5 years								
Grandparental care	0.0683 (0.170)	1.607 (1.002)	0.0524 (0.0826)	0.149 (0.348)	0.212* (0.103)	-0.509 (0.474)	-0.00450 (0.116)	0.0686 (0.507)
Observations	980	974	2335	2313	2279	2257	2334	2312
F-Statistic		28.978		112.173		111.832		112.332
Mean	8.464	8.464	7.769	7.769	7.280	7.280	6.219	6.219
Age: 6-10 years								
Grandparental care	1.067 ⁺ (0.569)	0.0749 (0.103)	0.0687 (0.0653)	0.158 (0.312)	0.0810 (0.0855)	0.230 (0.395)	-0.163 ⁺ (0.0936)	1.344** (0.442)
Observations	3252	3235	3694	3656	3642	3605	3695	3657
F-Statistic		56.445		157.629		157.105		157.235
Mean	8.466	8.466	7.661	7.661	7.264	7.264	6.430	6.430
Age: 0-10 years								
Grandparental care	0.0749 (0.103)	1.225* (0.583)	-0.0166 (0.0505)	0.00483 (0.239)	0.118 ⁺ (0.0678)	0.0661 (0.301)	-0.0204 (0.0736)	0.847** (0.326)
Observations	5556	5523	6066	5990	5944	5870	6066	5990
F-Statistic		62.660		299.233		296.693		298.984
Mean	8.463	8.463	7.750	7.750	7.229	7.229	6.330	6.330

Note: Robust standard errors in parentheses. For the outcome "Child care", robust standard errors clustered at the household level. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Child care: satisfaction with the child care situation (on child level, all other outcomes on parental level), General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (c) for the outcome "Child care" and (d) for all other outcomes in the appendix. *Source:* Pairfam (2009-2019), weighted, own calculation.

Table H.34: Results: Mothers' satisfaction with contacts, relationship and work-life balance

	OLS: Contacts (1)	IV: Contacts (2)	OLS: Relationship (3)	IV: Relationship (4)	OLS: Work-life balance (5)	IV: Work-life balance (6)
Scale: 0-10						
Age: 0-2 years						
Grandparental care	-0.0376 (0.116)	-0.0239 (0.511)	0.101 (0.118)	-0.202 (0.497)	-0.281 (0.243)	-2.129** (0.796)
Observations	2050	2025	1958	1942	533	527
F-Statistic		97.436		96.010		35.533
Mean	7.222	7.222	7.788	7.788	6.346	6.346
Age: 3-5 years						
Grandparental care	-0.0694 (0.107)	-0.192 (0.444)	-0.0133 (0.117)	-0.857 (0.545)	-0.126 (0.186)	1.060 (0.939)
Observations	2335	2313	2203	2186	940	934
F-Statistic		112.173		102.627		31.159
Mean	7.286	7.286	7.515	7.515	6.175	6.175
Age: 6-10 years						
Grandparental care	-0.0344 (0.0887)	1.009* (0.424)	0.165 ⁺ (0.0997)	0.253 (0.472)	-0.287* (0.138)	-0.124 (0.580)
Observations	3695	3657	3385	3365	1806	1786
F-Statistic		157.235		148.895		81.772
Mean	7.330	7.330	7.457	7.457	6.452	6.452
Age: 0-10 years						
Grandparental care	-0.0474 (0.0672)	0.429 (0.298)	0.0746 (0.0734)	-0.0276 (0.334)	-0.244* (0.116)	-0.145 (0.442)
Observations	6067	5991	5616	5572	2586	2555
F-Statistic		298.893		286.239		139.231
Mean	7.312	7.312	7.561	7.561	6.358	6.358

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.

Table H.35: Results: Fathers' satisfaction with child care, general life, education and leisure

	OLS: Child care (1)	IV: Child care (2)	OLS: General (3)	IV: General (4)	OLS: Educ./career (5)	IV: Educ./career (6)	OLS: Leisure (7)	IV: Leisure (8)
Scale: 0-10								
Age: 0-2 years								
Grandparental care	0.138 (0.226)	2.503 (1.617)	0.122 (0.0753)	0.0134 (0.295)	0.167 (0.104)	-1.110* (0.454)	-0.100 (0.121)	0.211 (0.484)
Observations	621	613	1879	1846	1877	1844	1878	1845
F-Statistic		11.587		96.66		93.067		93.375
Mean	8.640	8.640	7.910	7.910	7.483	7.483	6.269	6.269
Age: 3-5 years								
Grandparental care	0.297 (0.196)	1.589+ (0.811)	0.0834 (0.0790)	-0.468 (0.319)	-0.0102 (0.108)	-0.982* (0.427)	-0.0335 (0.118)	-0.519 (0.516)
Observations	731	724	1832	1813	1830	1811	1829	1810
F-Statistic		35.578		93.863		93.224		94.245
Mean	8.357	8.357	7.75	7.75	7.500	7.500	6.276	6.276
Age: 6-10 years								
Grandparental care	0.270* (0.120)	1.931** (0.687)	0.0357 (0.0687)	0.264 (0.379)	-0.0144 (0.0842)	-0.304 (0.462)	-0.108 (0.0974)	0.0389 (0.523)
Observations	2438	2419	2483	2459	2480	2456	2482	2458
F-Statistic		42.768		83.738		83.129		84.387
Mean	8.508	8.508	7.743	7.743	7.518	7.518	6.540	6.540
Age: 0-10 years								
Grandparental care	0.314** (0.118)	1.863** (0.642)	0.0273 (0.0493)	0.0396 (0.218)	0.0351 (0.0671)	-0.705* (0.303)	-0.127+ (0.0749)	-0.0752 (0.337)
Observations	4216	4178	4506	4448	4501	4443	4504	4446
F-Statistic		49.216		215.095		214.958		216.167
Mean	8.360	8.360	7.82	7.82	7.518	7.518	6.466	6.466

Note: Robust standard errors in parentheses. For the outcome "Child care", robust standard errors clustered at the household level. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Child care: satisfaction with the child care situation (on child level, all other outcomes on parental level), General: general life satisfaction, Educ./career: Satisfaction with education and career, Leisure: satisfaction with leisure and hobbies. The regressions include the control variables listed in table B.1 column (c) for the outcome "Child care" and (d) for all other outcomes in the appendix. *Source:* Pairfam (2009-2019), weighted, own calculation.

Table H.36: Results: Fathers' satisfaction with contacts, relationship and work-life balance

	OLS: Contacts (1)	IV: Contacts (2)	OLS: Relationship (3)	IV: Relationship (4)	OLS: Work-life balance (5)	IV: Work-life balance (6)
Scale: 0-10						
Age: 0-2 years						
Grandparental care	-0.115 (0.115)	-0.219 (0.484)	-0.0866 (0.120)	-0.356 (0.488)	0.0323 (0.163)	0.120 (0.653)
Observations	1877	1844	1878	1845	1082	1074
F-Statistic		93.09		92.036		60.258
Mean	6.592	6.592	7.7892	7.789	5.810	5.810
Age: 3-5 years						
Grandparental care	0.0204 (0.116)	0.196 (0.520)	0.0961 (0.117)	-0.308 (0.473)	-0.251 (0.168)	-1.518* (0.680)
Observations	1830	1811	1828	1809	1032	1026
F-Statistic		92.968		93.198		50.699
Mean	6.56	6.56	7.594	7.594	5.857	5.857
Age: 6-10 years						
Grandparental care	-0.0969 (0.0968)	1.221* (0.571)	0.0129 (0.108)	0.101 (0.644)	-0.285 ⁺ (0.146)	-0.858 (0.661)
Observations	2481	2457	2479	2455	1484	1476
F-Statistic		83.712		82.555		58.603
Mean	6.833	6.833	7.674	7.674	5.925	5.925
Age: 0-10 years						
Grandparental care	-0.0889 (0.0724)	0.298 (0.344)	-0.0160 (0.0785)	-0.343 (0.372)	-0.211* (0.106)	-0.428 (0.426)
Observations	4504	4446	4501	4443	2646	2627
F-Statistic		215.04		213.54		152.336
Mean	6.773	6.773	7.703	7.703	5.906	5.906

Note: Robust standard errors in parentheses. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The outcome variables are all ordinal variables on a scale from 0 (very dissatisfied) to 10 (very satisfied). Contacts: satisfaction with social contacts and friends, Relationship: satisfaction with the relationship with the current partner, Work-life balance: satisfaction with the proportion of time that individual spends on the job or for vocational training or university education relative to the time that individual spends on personal life. The regressions include the control variables listed in table B.1 column (d) in the appendix.

Source: Pairfam (2009-2019), weighted, own calculation.