

The impact of parenthood on depressive symptoms across family policy regimes in Europe

Anna Baranowska-Rataj^{*†)}, Lisa Harryson^{*}, Kristen W. Springer^{‡)}

^{*})Department of Sociology, Umeå University

[†])Institute of Statistics and Demography, Warsaw School of Economics

[‡])Department of Sociology, Rutgers University

Abstract

The aim of this study is to examine the impact of parenthood on depressive symptoms, and to investigate what channels this influence in cross-country comparative perspective. We consider the overall impact of parenthood on mental health as a sum of the positive direct effects of raising children, and negative indirect effects such as distress related to intrahousehold division of paid labor or financial hardship. The role of these indirect effects may vary across countries with different family policies.

We use data from European Social Survey and we implement mediation analysis to disentangle direct and indirect effects of raising children in country groups representing different family policies regimes. Our results show that the association between parenthood and depressive symptoms is mediated by distress related to intrahousehold division of paid labor and financial hardship, but these influences are context dependent. They are non-existent in family policy regimes with substantial state support in the form of childcare services and cash family benefits. Distress related to intrahousehold division of labor or financial hardship contributes to depression among parents only in family policy regimes where the state support for families with children is very limited.

Acknowledgements

This research was carried out within a project *The impact of the number of children on the well-being of families in Europe* financed by the grant no DEC-2011/03/D/HS4/04258 from the National Science Centre in Poland.

Background

Depression has received increasing attention as a significant public health issue and a major factor decreasing the quality of life in developed countries (Teghtsoonian, 2009). It constitutes the most common form of psychological distress, and has been seen as a barometer of life strains (Ross et al., 1983). Parenthood may be regarded as one of the risk factors for experiencing depressive symptoms (Helbig et al., 2006; Evenson and Simon, 2005). While raising children is often seen as bringing emotional rewards and a sense of personal fulfillment (Aassve et al., 2012; Aassve et al., 2015), it also requires financial expenses, which makes parents with small children particularly vulnerable to the risk of poverty (Aassve et al., 2005). At the same time, financial strain increases depression levels (Ross et al., 1983). Raising children also involves substantial reorganization of professional and personal life, which may have a negative impact on mental health. The degree to which having children raises the risk of financial hardship and affects labor market involvement of parents differs across European countries (Aassve et al., 2005; Sigle-Rushton and Waldfogel, 2007; Barbieri and Bozzon, 2016).

In this study, we examine the impact of parenthood on depressive symptoms among men and women in Europe, and we investigate what channels this influence across different family policy regimes. Our analytical framework is guided by *the costs and rewards of parenting* perspective (Nomaguchi, 2012; Nomaguchi and Milkie, 2003), which emphasizes the need to disentangle the factors that are detrimental for parents' mental health from those enhancing parental well-being. We consider the overall impact of parenthood on mental health as a sum of the direct effects of raising children, which may include personal development and accumulation of social capital for instance, and indirect effects such as distress related to adjusting the household's division of labor to children's needs or financial hardship. We assume that the impact of having children may be neutral or even protective against depression, once the intrahousehold division of paid labor or financial hardship is taken into account.

The burden of financial and care responsibilities is allocated differently between mothers, fathers, the state, and the market, depending on the institutional and cultural context (Lewis et al., 2008). As Esping-Andersen's (1990) welfare regime types do not capture the differences in these allocation mechanisms (Daly, 2000), alternative classifications of welfare regimes have been developed in the literature. Based on typologies

developed by Leitner (2003) and Javornik (2014), one can distinguish family policy regimes differing in terms of availability of formal childcare and generosity of financial support for families with children. We expect the association between parenthood and depressive symptoms to be mediated by intrahousehold division of paid labor and financial hardship least strongly in family policy regimes with substantial state support for parents.

To sum up, the goal of this paper is to answer three research questions. First, we make an overall assessment whether parents and non-parents differ in terms of levels of depressive symptoms and we examine gender differences in this respect. Second, we assess whether the relationship between parenthood and depressive symptoms is mediated by division of paid labor within couples and by families' financial hardship. Finally, we compare the role of mediators across groups of countries representing different family policy regimes to understand the potential role of social policies in shaping these pathways.

This study makes a contribution to the understanding of how parenthood and why mental health are associated. This is particularly important as previous studies investigating parenthood and mental health have paid little attention to potential mediating variables (Wang, 2004; Grönlund and Öun, 2010). By considering the division of paid labor and financial hardship as potential factors that mediate the relationship between parenthood and depression, it is possible to outline the direct and indirect effects of parenthood on mental health. While previous studies often restricted analysis to mothers (Helbig et al., 2006), our study contributes with analysis that includes also fathers as well as men and women without children. In addition to this, our study has an important methodological contribution through combining information on multiple actors within families (i.e. individuals and their partners) in order to consider see how the interplay between financial and housework contributions operates within a couple. Also, this study is one of the few using a cross-country comparative perspective on parenthood and mental health; i.e. examining the influence of family on depressive symptoms with particular attention to the way in which these patterns are shaped by family policy regimes.

Previous research

Direct and indirect effects of parenthood on depression

A large body of research shows that an individual family situation has a profound impact on mental health, because it provides psychological resources (but also creates tensions) that protect (but may also weaken) the health of its members (Carr and Springer, 2010). A vast number of studies indicates that having a partner is associated with fewer symptoms of emotional distress (Simon, 2002), although the benefits from partnership may depend on the type of union, its quality and stability (Mastekaasa, 1992; Johnson and Wu, 2002). Compared to research on differences in mental health between partnered and single individuals, much less evidence exists on the relationship between parenthood and mental health and the few available studies provide rather mixed results. Some of them indicate that parenthood is associated with fewer depressive disorders (Helbig et al., 2006; Huijts et al., 2013), others report that parenthood does not improve mental health (Pudrovskaya, 2008; Evenson and Simon, 2005) and yet other studies suggest that the direction and magnitude of this association depends on circumstances such as the timing and union context of childbearing (Spence, 2008) as well as support received by parents (Mistry et al., 2007).

Inconsistent results reported in previous studies may be traced back to the key idea about the conflicting influences of individual family situation on mental health (Carr and Springer, 2010). Parenthood brings both costs and rewards (Nomaguchi, 2012; Nomaguchi and Milkie, 2003; Pollmann-Schult, 2014). On the one hand, raising children provides parents with a sense of personal fulfillment, on the other hand, it requires substantial effort, investments of time and financial resources (Blake, 1981). Both costs and rewards of parenting may depend on children's number and age. According to the value of children theory, each child satisfies different types of needs that parents may have (Hoffman and Hoffman, 1973). At the same time, each additional child that parents decide to have may pose additional restrictions on parental resources of time and energy (Blake, 1981). The emotional gains from taking care of children are most substantial at the time when children are small (Nomaguchi, 2012). However, the expenses and sacrifices that parents need to make are often also concentrated in that very time span.

According to the costs and rewards of parenting perspective (Nomaguchi, 2012; Nomaguchi and Milkie, 2003; Pollmann-Schult, 2014), in order to understand the impact of parenthood on mental health, it is necessary to

disentangle the factors enhancing parental well-being from those detrimental for parents' mental health. In this paper we focus on two interrelated aspects of indirect costs: intrahousehold division of paid labor and financial hardship. We know from previous research that the division of paid and unpaid labor is not equal within families. In many societies, men are assumed to be breadwinners whereas women are expected to play the role of a primary caregiver, and this conservative role specialization is adopted particularly commonly among families with small children (Bianchi et al., 2000) as well as in large families (Baranowska-Rataj and Matysiak, 2016). Both men's and women's roles within a male breadwinner household may have implications for mental health. Being the only person responsible for the financial situation of a household may put a lot of pressure on men, because the welfare of all their closest family members depends on how successful they are in their labor market career. At the same time, for women, staying at home with children often implies being solely responsible for household duties, which may contribute to feelings of inequity, isolation and thus raise depression levels (Bird, 1999; Barnett and Hyde, 2001). As compared to a dual earner household, the male breadwinner model offers fewer opportunities for mutual support among partners and reducing the burden related to the employee and parental roles. Hence, role specialization may make both fathers and mothers more depressed than nonparents, albeit not necessarily for the same reasons. Nevertheless, very few studies have actually studied the gendered impacts of parenthood on depression and considered the mediating role of intrahousehold division of paid labor for this relationship (Dereuddre et al., 2014; Helbig et al., 2006).

While having children reduces parental - especially mothers' - opportunities for gainful employment, parenthood also requires substantial financial expenses (Blake, 1981; Aassve et al., 2005). A large body of evidence indicates that families with young children and large families are particularly likely to experience financial strain and are vulnerable to the risk of poverty (Sigle-Rushton and Waldfogel, 2007; Barbieri and Bozzon, 2016). At the same time, financial strain increases depression levels (Ross et al., 1983), especially if these restrictions are not buffered by social or institutional support (Mistry et al., 2007). Therefore, the impact of raising children on parental health may be mediated by financial hardship (Sperlich et al., 2011).

Family policy regimes and the magnitude of the mediation effects

Pathways leading from social position to inequalities in health need to be viewed in the social and institutional context. Family policies as well as social norms may moderate the impact of parenthood on health and well-being (Schober and Schmitt, 2017; Stier et al., 2012). Specifically, family policies such as subsidized childcare services may reduce the necessity to adopt role specialization whereby a man is a breadwinner and a woman is a primary caregiver. Generous support for families with children may also reduce financial hardship among parents. Moreover, policies promote egalitarian social norms supporting gender equality and hence may reduce the willingness of couples to adopt such division of labor within households (Sjöberg, 2004). Apart from reducing parents' exposure to potential sources of distress, the welfare state context may also play an important role for the magnitude of the effect of being exposed to these stressors. For example, adopting a dual-earner family model may not only be more common in countries with good conditions for reconciliation of parenthood and work-related duties, but it may also cause relatively less strain as compared to countries with little welfare state support for families with children. Hence, the degree to which the effects of parenthood on mental health are mediated by intrahousehold division of paid labor or financial hardship may differ across family policy regimes. Stronger mediation effects can be expected in the context where parents receive little support from the state in terms of organizing childcare and providing financial support for their youngest family members. Weaker or non-existent indirect costs of parenthood can be expected in turn in a setting where the burden of financial and care responsibilities is taken over by the state.

Previous research proposed a classification of countries according to the mechanisms of allocation of financial and care responsibilities between the state, parents and the market (Javornik, 2014; Leitner, 2003). Based on these classifications, one can distinguish between the following policy regimes: (1) *optional familialism*, with widespread formal childcare and financial support for families with children, (2) *explicit familialism* with limited formal child care and payments for child care provided within the family, (3) *implicit familialism* with restricted formal child care as well as a lack of cash support for families with children and (4) *defamilialistic* regimes with high availability of formal child care and limited in-cash benefits for families with children. We expect the association between parenthood and depressive symptoms to be mediated by intrahousehold division of paid labor and financial hardship least strongly in welfare state regimes characterized by *optional familialism* with substantial state support in the form of childcare services and cash family benefits. Countries with family

policies that follow the logic of *implicit familism* may impose strongest barriers towards combining work with parenthood, create highest risk for financial hardship and at the same time they may constitute a setting where the magnitude of the effect of being exposed to these stressors is strongest. Therefore, we expect mediation effects to be strongest in countries that adopt *implicitly familistic* policies.

Research design

Data

In order to answer our research questions, we use harmonized data from European Social Survey (ESS), a cross-national survey conducted across Europe since 2001. We use data for partnered men and women aged 18-45, living in the following countries that participated in ESS: Austria, Belgium, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Great Britain, Hungary, Ireland, Italy, Latvia, Netherlands, Poland, Portugal, Sweden, Slovenia and Slovakia. We restricted the sample to partnered men and women aged 18-45. Altogether, our sample is composed of 12 322 women and 9 833 men.

We use pooled three waves of ESS from 2006, 2012 and 2014, which included measures of mental health. Specifically, the questionnaires from these waves included a validated shortened version of the Center for Epidemiologic Studies Depression scale (CES-D) constructed to identify populations at risk for developing depressive disorders (Radloff, 1977). Using the same items in the ESS, Van de Velde et al. (2010) have shown that this shortened version of the CES-D is valid and reliable, and cross-culturally equivalent for all the countries in the survey. Additionally, it was demonstrated that the scale is equivalent for men and women. This scale includes eight items. Respondents were asked to indicate how much of the time during the past week they had (i) felt depressed, (ii) felt that everything they did was an effort, (iii) had restless sleep, (iv) felt happy, (v) felt lonely, (vi) enjoyed life, (vii) felt sad, and (viii) could not get going. For each item, respondents the following categories: 1 none or almost none, 2 some of the time, 3 most of the time, and 4 all or almost all the time. All items were recoded into a scale from 0 to 3, so that a high score indicates a high level of depressive symptoms. Recoded scale scores for the CES-D were then assessed using a summated rating that ranges from 0 to 24.

ESS provides detailed information necessary to construct our key explanatory variable, i.e. information on the presence, number and age of children in a family. We distinguish between individuals who have never had any children, adults with one child aged less than 15, adults with two children or more aged less than 15, adults

who have children that are aged more than 15 or left parental home. We wanted to focus on children aged less than 15 because as compared to younger children, children older than 15 no longer require intense monitoring and in principle are allowed to do paid work. We did not distinguish between different family sizes beyond the second child because of sample size limitations.

We examine the role of two mediators: households' division of paid labor as well as financial hardship. We divide households into four categories: dual earner households, male breadwinner households, female breadwinner households and jobless households. The key distinction in our analysis is the contrast between the male breadwinner households and the dual earner households, because the first of these household types represents partnerships with complementary roles, in which a father is employed and a mother is assumed to stay at home to care for the household and children, and the second represents partnerships parallel roles, in which both partners are employed and have opportunities to share domestic work (Ross et al., 1983). While intrahousehold division of paid labor could be examined in a more nuanced way, for example as a continuous measure of partners' relative contribution of time devoted to paid and unpaid work, our measures contrast the extreme cases of partners' involvement in either type of dutiesⁱⁱ. The second mediator, financial hardship, is measured with a question about respondent's assessment of the household's present income on a four-point scale: (1) living comfortably on present income (2) coping with present income (3) difficult to cope with present income (4) very difficult to cope with present income. We group together the first three categories and compare them the last two categories that are grouped to distinguish individuals experiencing financial difficulties.

We control for a number of factors that may confound the relationship between parenthood and depression. Specifically, we control for age, education attainment, and experiences of ethnic or racial discrimination as well as religiosity, because previous research on depression has shown that these factors play an important role (Mirowsky and Ross, 1992; Salgado et al., 2014). Age is included in linear form, education attainment distinguishes between categories of individuals with elementary education, lower secondary education, upper secondary education, as well as postsecondary and tertiary education. Experiences of discrimination is a dummy coded variable which distinguishes individuals who report discrimination to at least one of the following reasons: color or race, nationality, religion, language or ethnic group. Religiosity is measured on a

scale 0-10 from the category “not at all religious” up to “very religious”. The distribution of dependent and explanatory variables in our sample is presented in Table A1 in the Appendix.

In order to examine whether the effects of raising children on parental depression depend on the country context, we group countries according to the family policy regimes identified in Western Europe by Leitner (2003) and extended by Javornik (2014) to include the countries in Eastern Europe. A detailed description of these country groups is included in Table 1.

Table 1. Classification of family policy regimes following Leitner (2003) and Javornik (2014).

| | Optional familialism | Explicit familialism | Implicit familialism | Defamilialism |
|--|---|--|--|---|
| Formal childcare | Widespread | Limited | Limited | Available on the market (requires paying fees) |
| Financial support for families with children | Financial support for families with children | Payments for child care provided within the family | Lack of cash support | Limited in-cash benefits for families with children |
| Countries | Norway, Sweden, Denmark, Finland, Belgium, France | Germany, Austria, Netherlands, Luxembourg, Italy, Hungary, Czech Rep., Estonia | Portugal, Spain, Poland, Slovakia and Latvia | Great Britain, Ireland, Slovenia, Lithuania |

Methods

In this study, in order to address the first question whether parents report higher levels of depressive symptoms as compared to nonparents, we estimate linear regression models. In order to get a preliminary answer to our further questions, we compare results from with and without the variables that represent mediators and operationalize the indirect impact of raising children (Baron and Kenny, 1986). In the second step, we use the recently developed mediation analysis tools to carry out a formal test whether the intrahousehold division of paid labor and financial hardship mediate the relationship between parenthood and depression. All our analyses are carried out separately for men and women in country groups representing different family policy regimes.

Mediation analysis pertains to disentangling the impact of direct and indirect effects of exposure on an outcome of interest. In case of our study, the key explanatory variable is the number of children at home and our outcome of interest are depressive symptoms. Intra-household division of paid labor and financial hardship may be seen as mediators, i.e. variables channeling the impact of parenthood on depressive symptoms. We hypothesize that intra-household division of paid labor and financial hardship may offset the otherwise positive direct effects of having children on mental health, albeit the magnitude of this offsetting effect may differ across family policy regimes.

Quantifying the impact of the mediators is straightforward in case if there is just one mediator which takes a form of a binary or continuous variable (Imai et al., 2010). Measuring the effects of multiple multicategorical mediators has been a challenge (Preacher, 2015), but recent methodological developments in mediation analysis offer some innovative solutions. Specifically, we employ a method of using inverse odds ratio weighting proposed by Nguyen et al. (2015) in order to incorporate two mediators, one of which - intra-household division of paid labor - is multicategorical. Inverse odds ratio weighting takes advantage of the odds ratio's invariance property: the odds ratio for the relationship between two variables is the same regardless of then is specified as exposure or outcome. This permits estimation of the odds ratio relating exposure and mediators via multivariate logistic regressions of a binary exposure on the mediator and covariates. The procedure follows in several steps. The first step condenses information on the odds ratio for the relationship between the exposure and multiple mediators, conditional on covariates, by regressing exposure on mediators and covariates. Thus, we run two separate logistic regression models: the first compares having one child to having no dependent children and second defines exposure as having two or more children as compared to having no dependent children. In the next step, the inverse of the covariate-adjusted exposure-mediator odds ratio association is used to weight the primary analytical regression, with outcome defined as depressive symptoms. Such weighted regression model estimates the direct effect of having children on the depressive symptoms, and indirect effects are identified by subtracting direct effects from total effects.

Results

Descriptive statistics

To get an overall impression about the association between parenthood and depressive symptoms, we examine the mean scores of depressive symptoms according to the number of children across different family policy regimes (Table 2). Our results indicate that the level of depressive symptoms among women and men who have at least one child is slightly higher as compared to nonparents in all countries except for the group representing the optional familialism. As noted earlier, the limited magnitude of the association between parenthood and depressive symptoms may be related to the fact that raising children has both positive effects, such as emotional rewards or personal development, and negative effects, such as distress related to adjusting the household's division of labor to children's needs, and these influences might cancel out each other.

Table 2. Mean levels of depressive symptoms according to the number of children – a comparison across family policy regimes in Europe.

| | Optional familialism | Explicit familialism | Implicit familialism | Defamilialism |
|-----------------------------------|-------------------------|-------------------------|-------------------------|---------------|
| Women | | | | |
| Never had children | 4,9 | 5,2 | 5,3 | 4,6 |
| 1 child | 4,8 | 5,4 | 5,8 | 4,9 |
| 2+ children | 4,7 | 5,2 | 5,3 | 4,6 |
| Older children/left parental home | 5,5 | 6,1 | 6,2 | 5,7 |
| Men | | | | |
| Never had children | 4,1 | 4,7 | 4,5 | 4,2 |
| 1 child | 3,9 | 4,9 | 4,7 | 4,4 |
| 2+ children | 4,0 | 4,7 | 4,7 | 4,2 |
| Older children/left parental home | 4,0 | 6,1 | 5,4 | 5,2 |

Source: ESS data.

Our second research question pertains to the mediating role of the intrahousehold division of paid labor and financial hardship for the relationship between parenthood and depressive symptoms. The underlying assumption behind this question is that families with small children may be more likely to adopt arrangements whereby men focus on paid work and women stay at home with children. We also assume that families with small children are more likely to experience financial hardship. The descriptive statistics presented in Table 3 and Table 4 confirm that families with small children are indeed associated with strict role specialization among couples and with poorer financial situation. With the exception of countries in the optional familialism group,

parents with one child are much less likely to live in dual earner households and at the same time they are more likely to live in male breadwinner households as compared to individuals who never had children. Among adults with two children or more, the proportion of individuals living in dual earner households is even smaller. The magnitude of the decline in the proportion of adults living in dual earner households associated with having small children at home varies across groups of countries and it is least strong in countries where policies follow the logic of optional familialism.

Table 3. The distribution of models of intrahousehold division of paid labor according to the number of children – a comparison across family policy regimes in Europe.

| | Never had children | 1 child | 2+ children | Older children/left parental home |
|-----------------------------|--------------------|---------|-------------|-----------------------------------|
| Optional familialism | | | | |
| Dual earner | 62,4% | 74,4% | 69,7% | 73,1% |
| Male breadwinner | 19,8% | 16,0% | 22,6% | 15,2% |
| Female breadwinner | 8,2% | 6,0% | 4,0% | 6,1% |
| Jobless household | 9,6% | 3,6% | 3,7% | 5,6% |
| Total | 100,0% | 100,0% | 100,0% | 100,0% |
| Explicit familialism | | | | |
| Dual earner | 77,0% | 65,4% | 53,7% | 76,0% |
| Male breadwinner | 12,2% | 27,3% | 37,0% | 13,8% |
| Female breadwinner | 5,5% | 3,9% | 3,8% | 6,3% |
| Jobless household | 5,2% | 3,5% | 5,5% | 4,0% |
| Total | 100,0% | 100,0% | 100,0% | 100,0% |
| Implicit familialism | | | | |
| Dual earner | 71,0% | 62,6% | 52,8% | 65,8% |
| Male breadwinner | 17,8% | 26,0% | 35,5% | 20,6% |
| Female breadwinner | 7,2% | 6,8% | 4,8% | 9,2% |
| Jobless household | 4,0% | 4,7% | 6,8% | 4,3% |
| Total | 100,0% | 100,0% | 100,0% | 100,0% |
| Defamilialism | | | | |
| Dual earner | 74,6% | 60,5% | 53,5% | 69,6% |
| Male breadwinner | 15,1% | 28,2% | 32,9% | 17,3% |
| Female breadwinner | 5,5% | 4,4% | 4,4% | 5,5% |
| Jobless household | 4,8% | 6,9% | 9,2% | 7,6% |
| Total | 100,0% | 100,0% | 100,0% | 100,0% |

Source: ESS data.

According to the results presented in Table 4, individuals living in households with small children tend to experience more financial difficulties as compared to people who never had children. This association varies across groups of countries with diverging family policy regimes. Having children is not strongly associated with the risk of financial hardship among parents in countries following the optional familialism logic. In other

groups of countries, the proportion of people experiencing financial difficulties is higher by 7-8 percentage points among parents with one child as compared to non-parents. In the group of countries with implicitly familialistic policies, parents with two children or more have about 6 percentage point higher risk of experiencing financial difficulties as compared to parents with only one child, and in defamilialistic states this difference amounts to about 4 percentage points.

Table 4. The proportion of individuals experiencing financial hardship according to the number of children – a comparison across family policy regimes in Europe.

| | Optional familialism | Explicit familialism | Implicit familialism | Defamilialism |
|-----------------------------------|----------------------|----------------------|----------------------|---------------|
| Never had children | 11,1% | 14,8% | 19,0% | 13,3% |
| 1 child | 12,5% | 21,3% | 27,0% | 19,9% |
| 2+ children | 13,4% | 22,6% | 33,3% | 23,7% |
| Older children/left parental home | 16,1% | 26,2% | 32,5% | 21,2% |

Source: ESS data.

Overall, our descriptive statistics show that parents tend to experience slightly more depressive symptoms as compared to non-parents, and at the same time, they are more exposed to the risk factors of mental health problems. In the next step, we examine whether the association between having children and depression persists also in multivariate setting, after controlling for background characteristics and how this association changes after we include the mediators, i.e. intrahousehold division of paid labor and financial hardship.

Parenthood and depression - mediation analysis

Our models presented in Table 5 and Table 6 show how having dependent children affects depression symptoms among women and men in different family policy regimes. The first specification of models (Model 1) includes only variables capturing the total effects of having children on depressive symptoms, whereas the second specification (Model 2) includes mediators: intrahousehold division of paid labor and financial hardship. In the second specification, we can observe the impact of having children on depressive symptoms net of indirect effects of parenthood. As long as our mediators capture the indirect effects of parenthood on depressive symptoms, the coefficients corresponding to the association between having dependent children and depressive symptoms should change after including the mediators, because the mediators will capture the indirect effects of having children, and the variables measuring the number of children will reflect only the impact of direct effects of parenthood.

Our results show that having one dependent child does not affect depressive symptoms among mothers or fathers regardless of whether we take indirect effects of parenthood into account or not. When we look at the impact of having two children or more, baseline models in all country groups also show no effects, but after we include mediators into account, parenthood is revealed to protect from depressive symptoms among mothers in country groups representing explicit familialism and implicit familialism as well as among fathers in country groups representing explicit familialism and defamilialism. This finding confirms our hypothesis that intrahousehold division of paid labor and financial hardship may offset the otherwise positive direct effects of having children on mental health. It seems that for parents with only one dependent child, there are no direct or indirect effects of parenthood on depressive symptoms. With the exception of parents in countries with optional familialism regime, the situation of parents with two or more dependent children is more complex. On the one hand, they tend to experience more financial hardship and they are more often forced to adopt a family model which in general is associated with higher depressiveness. On the other hand, having at least two children may have a protective effect against depressive symptoms.

Regarding the effects of control variables, our results show that in most country groups, age does not have a strong and statistically significant effect on depression, except for women in countries with implicit familialism regime and men in countries representing the explicit familialism regime. The level of education attainment is positively associated with mental health. Having experienced discrimination is associated with higher depression scores. We do not find a strong protective influence of religiosity. The effects of mediators are consistent with previous research: living in a male breadwinner household has a negative effect on mental health of women (Bird, 1999; Barnett and Hyde, 2001). For men, being the main breadwinner in the household is not associated with mental health, but living in a female breadwinner household strongly raises depressive symptoms, with strongest associations observed in countries representing explicit familialism and implicit familialism regimes. Interestingly, this association is stronger than the association between living in a jobless household and depression symptoms.

Table 5. Results of linear regression models on the impact of parenthood on depressive symptoms among women a comparison across family policy regimes in Europe.

| | Optional familialism | | Explicit familialism | | Implicit familialism | | Defamilialism | |
|--|----------------------|-------------------|----------------------|-------------------|----------------------|-------------------|-------------------|-------------------|
| | Model 1 | Model 2 | Model 1 | Model 2 | Model 1 | Model 2 | Model1 | Model 2 |
| Age | -0,00 (0,01) | 0,01 (0,01) | -0,00 (0,01) | 0,01 (0,01) | 0,04** (0,02) | 0,05*** (0,02) | -0,01 (0,01) | -0,00 (0,01) |
| Education attainment (ref. postsecondary or tertiary) | | | | | | | | |
| Elementary | 1,83*** (0,43) | 1,11*** (0,42) | 2,82*** (0,59) | 1,77*** (0,59) | 1,36*** (0,32) | 0,56* (0,32) | 1,62*** (0,41) | 0,71* (0,42) |
| Lower secondary | 1,30*** (0,27) | 0,79*** (0,27) | 1,68*** (0,19) | 1,07*** (0,19) | 0,81*** (0,24) | 0,30 (0,24) | 1,36*** (0,21) | 0,86*** (0,22) |
| Upper secondary | 0,58*** (0,13) | 0,37*** (0,13) | 0,72*** (0,13) | 0,48*** (0,12) | 0,66*** (0,21) | 0,30 (0,20) | 0,54*** (0,16) | 0,31* (0,16) |
| Experienced discrimination | 1,43*** (0,34) | 1,23*** (0,34) | 1,26*** (0,26) | 0,80*** (0,26) | 1,72*** (0,57) | 1,16** (0,56) | 0,30 (0,38) | 0,10 (0,38) |
| Religiosity | 0,02 (0,02) | -0,00 (0,02) | 0,04* (0,02) | 0,04* (0,02) | -0,01 (0,03) | -0,02 (0,03) | -0,04 (0,03) | -0,03 (0,03) |
| No children (ref. never had children) | | | | | | | | |
| 1 child | -0,08 (0,19) | -0,13 (0,19) | -0,08 (0,17) | -0,14 (0,16) | 0,14 (0,25) | 0,05 (0,24) | 0,13 (0,21) | -0,05 (0,21) |
| 2+ children | -0,15 (0,18) | -0,28 (0,17) | -0,19 (0,16) | -0,38** (0,17) | -0,34 (0,26) | -0,57** (0,25) | 0,06 (0,20) | -0,18 (0,20) |
| Older children/left parental home | 0,42 (0,29) | 0,27 (0,28) | 0,44** (0,22) | 0,38* (0,22) | 0,15 (0,34) | 0,03 (0,33) | 0,78*** (0,28) | 0,55** (0,28) |
| Intrahousehold division of paid labor (ref. dual earner) | | | | | | | | |
| Female breadwinner | | 0,38 (0,26) | | 0,41 (0,28) | | 1,02*** (0,31) | | -0,55* (0,33) |
| Male breadwinner | | 0,77*** (0,16) | | 0,28** (0,14) | | 0,43** (0,19) | | 0,23 (0,17) |
| Jobless household | | 0,46 (0,30) | | 1,38*** (0,29) | | 0,89** (0,39) | | 1,15*** (0,28) |
| Financial hardship | | 1,85*** (0,19) | | 1,71*** (0,15) | | 1,89*** (0,19) | | 1,55*** (0,18) |
| Constant | 5,00*** (0,39) | 4,28*** (0,40) | 3,71*** (0,38) | 3,51*** (0,38) | 3,68*** (0,57) | 3,20*** (0,56) | 5,17*** (0,44) | 4,64*** (0,44) |
| N | 3388 | 3388 | 4056 | 4056 | 2364 | 2364 | 2514 | 2514 |

Source: ESS data. Note: control variables include country fixed effects. Standard errors in parentheses, significance levels: * p<0.05, ** p<0.01, *** p<0.001.

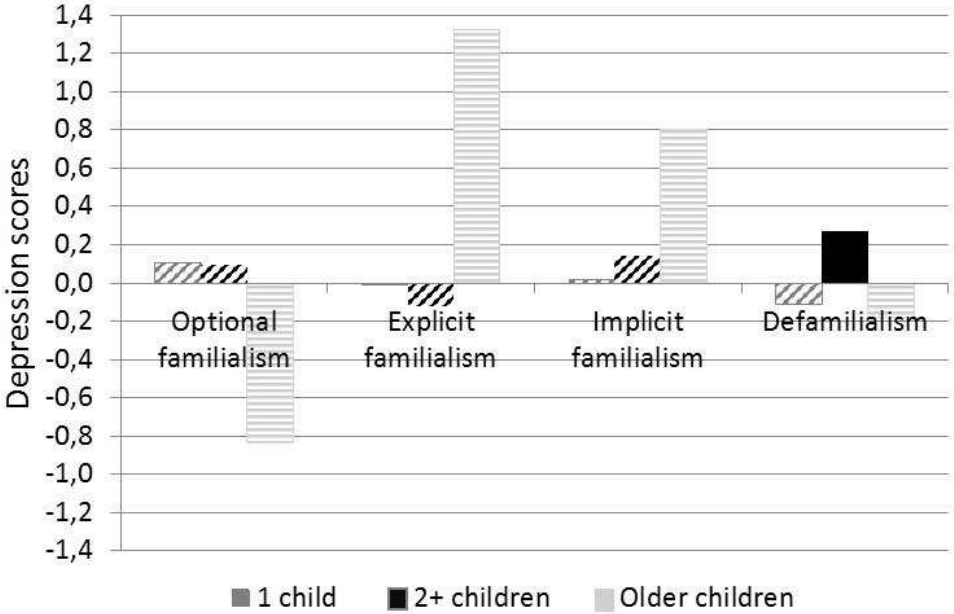
Table 6. Results of linear regression models on the impact of parenthood on depressive symptoms among men a comparison across family policy regimes in Europe.

| | Optional familialism | | Explicit familialism | | Implicit familialism | | Defamilialism | |
|--|----------------------|-------------------|----------------------|-------------------|----------------------|-------------------|-------------------|-------------------|
| | Model 1 | Model 2 | Model 1 | Model 2 | Model 1 | Model 2 | Model1 | Model 2 |
| Age | -0,00 (0,01) | 0,01 (0,01) | 0,03** (0,01) | 0,04*** (0,01) | 0,01 (0,02) | 0,02 (0,02) | 0,01 (0,01) | 0,02 (0,01) |
| Education attainment (ref. postsecondary or tertiary) | | | | | | | | |
| Elementary | 0,68* (0,40) | 0,07 (0,40) | 1,25** (0,60) | 0,85 (0,59) | 1,00*** (0,32) | 0,30 (0,31) | 0,98** (0,39) | 0,49 (0,38) |
| Lower secondary | 0,67*** (0,20) | 0,35* (0,20) | 1,16*** (0,22) | 0,66*** (0,22) | 0,30 (0,22) | -0,30 (0,22) | 0,47* (0,24) | 0,08 (0,24) |
| Upper secondary | 0,02 (0,11) | -0,09 (0,11) | 0,23* (0,13) | 0,09 (0,13) | 0,25 (0,21) | 0,02 (0,20) | 0,40** (0,18) | 0,23 (0,18) |
| Experienced discrimination | 1,54*** (0,26) | 1,34*** (0,25) | 0,82*** (0,27) | 0,40 (0,27) | 1,57*** (0,42) | 0,81** (0,41) | 1,32*** (0,36) | 1,21*** (0,35) |
| Religiosity | 0,02 (0,02) | 0,01 (0,02) | 0,01 (0,02) | 0,00 (0,02) | 0,00 (0,03) | 0,01 (0,03) | 0,03 (0,03) | 0,03 (0,03) |
| No children (ref. never had children) | | | | | | | | |
| 1 child | -0,25 (0,16) | -0,26 (0,16) | -0,11 (0,17) | -0,21 (0,17) | 0,07 (0,22) | -0,04 (0,22) | 0,04 (0,22) | -0,11 (0,22) |
| 2+ children | -0,12 (0,15) | -0,13 (0,14) | -0,15 (0,17) | -0,32* (0,17) | 0,12 (0,24) | -0,10 (0,23) | -0,20 (0,21) | -0,47** (0,21) |
| Older children/left parental home | -0,13 (0,27) | -0,15 (0,27) | 0,88*** (0,23) | 0,63*** (0,23) | 0,36 (0,32) | 0,20 (0,31) | 0,58* (0,30) | 0,38 (0,29) |
| Intrahousehold division of paid labor (ref. dual earner) | | | | | | | | |
| Female breadwinner | | 0,87*** (0,24) | | 1,32*** (0,28) | | 2,12*** (0,34) | | 1,67*** (0,34) |
| Male breadwinner | | 0,17 (0,14) | | 0,10 (0,14) | | 0,25 (0,18) | | 0,11 (0,18) |
| Jobless household | | 0,41* (0,24) | | 0,23 (0,29) | | 1,11*** (0,36) | | 1,29*** (0,32) |
| Financial hardship | | 1,40*** (0,17) | | 1,74*** (0,16) | | 1,56*** (0,19) | | 1,48*** (0,21) |
| Constant | 3,98*** (0,35) | 3,43*** (0,36) | 2,98*** (0,44) | 2,65*** (0,44) | 3,66*** (0,59) | 3,23*** (0,57) | 3,71*** (0,50) | 3,18*** (0,49) |
| N | 2971 | 2971 | 3068 | 3068 | 1910 | 1910 | 1884 | 1884 |

Source: as in Table 6.

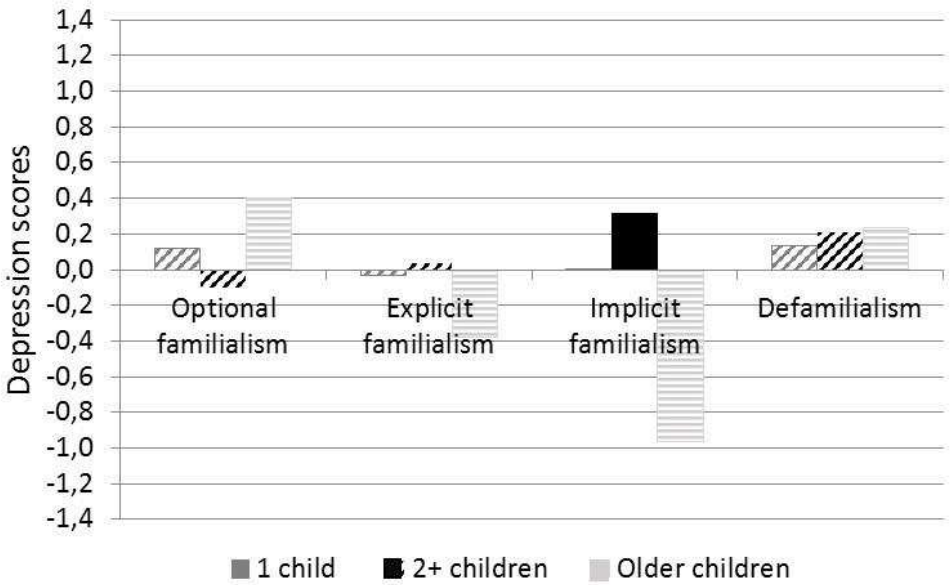
We calculated the magnitude of the mediation effects using methods developed by Nguyen et al. (2015). On Figure 1, we present the size of the indirect effects of parenthood for mothers with one child and with two or more dependent children in country groups representing family policy regimes. The indirect effects are almost equal to zero in all groups of countries when a mother has only one child. For mothers with two or more children, these indirect effects are still very small in countries where family policies follows the logic of optional familialism, and the same goes for explicit familialism. In the remaining country clusters, where the state supports families neither with childcare services nor with cash benefits, these indirect effects of parenthood are larger, but they are statistically significant only for the country group with defamilialistic policies. On Figure 2 we have shown in a similar manner the results for men. The contribution of indirect effects of parenthood to the level of depressive symptoms plays an important role only for fathers with at least two children in countries in implicitly familialistic policies.

Figure 1. Indirect effects of the number of children on depressive symptoms – results for women – a comparison across family policy regimes in Europe.



Source: ESS data, control variables: age, education attainment, experiences of ethnic or racial discrimination, religiosity, country fixed effects. Note: filled bars indicate effects statistically significant at 0.05 level.

Figure 2. Indirect effects of the number of children on depressive symptoms – results for men – a comparison across family policy regimes in Europe.



Source: as on Figure 1.

For the sake of completeness, Figure 1 and Figure 2 include estimations of the indirect effects of having older children (who either reside at home or left parental home). These effects are not statistically significant except for women in countries representing explicit familialism regime. This influence represents mainly the so-called ‘empty nest effect’ⁱⁱⁱ, and discussing it in more detail is beyond the scope of this paper. The decomposition developed by Nguyen et al. (2015) provides us also with estimates of direct effects of parenthood across different groups of countries. These estimates are similar to the estimates presented in Table 5 in Table 6 in Models 2. According to our theoretical framework, the direct effects of raising children are not moderated by the policies, instead, they may be related to the value of children or emotional rewards that parents derive from raising their offspring. Since this paper focuses on policy-related influences, we do not discuss these estimates in detail here, but we present them on Figure A1 and Figure A2 in the Annex.

Summary

The aim of this paper was to provide the evidence on the direct and indirect effects of parenthood for depressive symptoms in cross-country comparative perspective. Our results indicate that if we simply compare parents and non-parents, there seems to be no major difference in terms of levels of depressive symptoms between these two groups, and the number of children also seems to play no role. However, detailed analyses

carried out in this paper reveal a more complex picture. Our results show that in some societies the direct effects and the indirect effects of parenthood may cancel out each other. On the one hand, having children, and especially having two or more children, may strengthen the role specialization within couples, leading to adoption of gendered intrahousehold division of paid labor, which is not optimal for mental health of parents. Having dependent children contributes also to financial hardship of parents. On the other hand, raising children per se may play a neutral or protective role, and seems to decrease rather than increase the number of depressive symptoms. Our results provide an explanation for mixed and inconclusive results from previous research on the impact of parenthood on parental health. One possible reason for discrepancies is that studies differed in the degree to which they control for the indirect effects of parenthood that we have discussed here.

Another source of diverging results from previous research on the impact of parenthood on parental health might be the role of the context. Our results show that the role of the indirect effects of parenthood, i.e. the role of division of paid labor and financial hardship varies across family policy regimes. Indirect effects of parenthood play an important role for fathers with two children or more in countries adopting implicitly familialistic policies. For mothers with two children or more this holds in defamilialistic welfare states, where policy setup assumes purchasing childcare on the market. This highlights the importance of family policies, which have been seen as a tool preventing further fertility decline and improving life-work balance among parents (Mills et al., 2011).

Our study contributes also to the literature on the gender gap in depressive symptoms across societies. Previous research has shown that men and women differ in the number of reported depressive symptoms, and presented arguments regarding underlying factors, related to gender equality (Van de Velde et al., 2010). Our results add some insights referring to the intrahousehold division of paid labor and financial hardship that may also contribute to mental health problems among men and women. For example, we found that countries with an optional familialism regime have a greater proportion of parents who share the family burden of supply, which can be regarded as an important condition for gender equality in family life, and may per se have positive impact on parents' mental health (Hagqvist et al., 2012).

While our study contributes to the literature both in substantial and methodological way, it has a number of limitations. Most importantly, it is based on cross-sectional data, which makes it difficult to draw conclusions

about causal effects of parenthood on depressive symptoms. The decisions related to childbearing and involvement in paid work may be affected by the same set of factors that also determine mental health (Aassve et al., 2005). Another limitation in this study concerns the fact that we lack information on parental gender identity. ESS does not include other options for gender identities than the dichotomies of women and men. In future studies, it would be desirable to more closely analyze the couple as both individuals and individuals within dyads, and in these analyzes include the importance of sexuality.

Finally, this article focuses on the importance of family policy context for the relation between parenthood and mental health. It reveals the importance of intrahousehold division of paid labor for parents' mental health, which is in contrast to a more common focus on individual involvement in paid work. As we found that different family policy regimes are in various ways related to parents' mental health, it is reasonable to state that family policy constitutes an important tool for improving of mental health among parents.

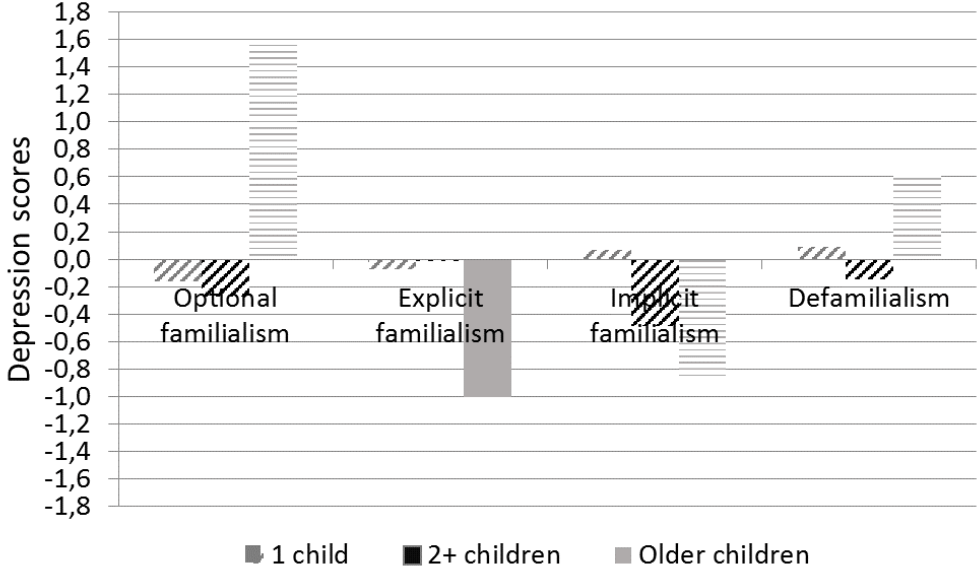
Appendix

Table A1. Sample structure - means of dependent and explanatory variables among men and women across family policy regimes.

| Welfare state regime | Women | | | | Men | | | |
|--------------------------------------|----------------------|----------------------|----------------------|---------------|----------------------|----------------------|----------------------|---------------|
| | Optional familialism | Explicit familialism | Implicit familialism | Defamilialism | Optional familialism | Explicit familialism | Implicit familialism | Defamilialism |
| Depression scores | 4,8 | 5,4 | 5,6 | 4,8 | 4,0 | 4,9 | 4,7 | 4,4 |
| Age | 34,3 | 34,7 | 35,0 | 34,9 | 34,8 | 35,6 | 35,7 | 35,5 |
| Elementary education | 2,2% | 0,9% | 10,2% | 3,0% | 1,8% | 1,0% | 9,8% | 4,1% |
| Lower secondary education | 6,0% | 11,9% | 19,5% | 13,2% | 8,1% | 10,1% | 24,3% | 12,5% |
| Upper secondary education | 35,7% | 46,2% | 36,0% | 29,9% | 43,4% | 50,7% | 38,1% | 30,7% |
| Tertiary and postsecondary education | 56,1% | 41,0% | 34,2% | 53,9% | 46,7% | 38,1% | 27,7% | 52,7% |
| Experienced discrimination | 3,5% | 5,0% | 2,1% | 3,3% | 4,6% | 5,7% | 3,8% | 4,7% |
| Religiosity | 4,3 | 4,1 | 5,5 | 4,8 | 3,4 | 3,3 | 4,6 | 3,9 |
| Never had children | 23,6% | 23,0% | 17,6% | 18,1% | 27,7% | 26,7% | 22,7% | 24,4% |
| 1 child | 27,5% | 32,1% | 37,3% | 29,9% | 23,1% | 29,9% | 38,4% | 27,8% |
| 2+ children | 41,4% | 31,9% | 31,4% | 38,7% | 43,9% | 30,9% | 28,2% | 36,7% |
| Older children/left parental home | 7,5% | 13,0% | 13,7% | 13,2% | 5,3% | 12,5% | 10,8% | 11,1% |
| Dual earner | 69,5% | 67,4% | 61,4% | 62,0% | 69,0% | 64,0% | 62,2% | 61,8% |
| Male breadwinner | 6,1% | 4,3% | 7,1% | 4,4% | 5,3% | 4,9% | 5,9% | 5,3% |
| Female breadwinner | 19,6% | 24,0% | 26,6% | 25,9% | 19,9% | 26,0% | 26,4% | 25,9% |
| Jobless | 4,8% | 4,3% | 4,8% | 7,7% | 5,9% | 5,1% | 5,5% | 7,1% |
| Financial hardship | 12,7% | 20,9% | 29,0% | 20,7% | 12,9% | 20,5% | 26,7% | 19,4% |

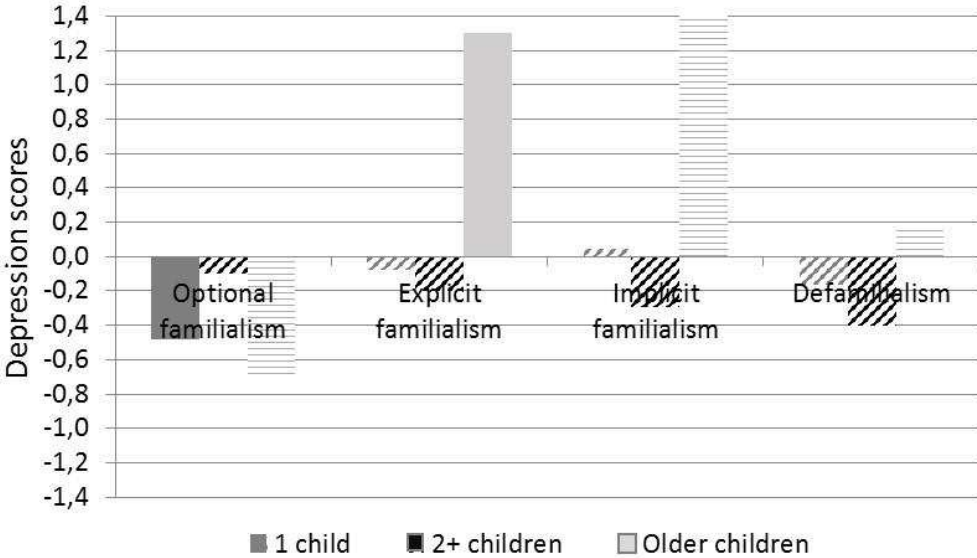
Source: ESS data.

Figure A1. Direct effects of the number of children on depressive symptoms – results for women – a comparison across family policy regimes in Europe.



Source: ESS data, control variables: age, education attainment, experiences of ethnic or racial discrimination, religiosity, country fixed effects. Note: filled bars indicate effects statistically significant at 0.05 level.

Figure A2. Direct effects of the number of children on depressive symptoms – results for men – a comparison across family policy regimes in Europe.



Source: as on Figure A1.

References

- Aassve A, Goisis A and Sironi M. (2012) Happiness and childbearing across Europe. *Social Indicators Research* 108: 65-86.
- Aassve A, Mazzucco S and Mencarini L. (2005) Childbearing and well-being: A comparative analysis of European welfare regimes. *Journal of European Social Policy* 15: 283-299.
- Aassve A, Mencarini L and Sironi M. (2015) Institutional Change, Happiness, and Fertility. *European Sociological Review*: jcv073.
- Baranowska-Rataj A and Matysiak A. (2016) The causal effects of the number of children on female employment-do European institutional and gender conditions matter? *Journal of Labor Research* 37: 343-367.
- Barbieri P and Bozzon R. (2016) Welfare, labour market deregulation and households' poverty risks: An analysis of the risk of entering poverty at childbirth in different European welfare clusters. *Journal of European Social Policy* 26: 99-123.
- Barnett RC and Hyde JS. (2001) Women, men, work, and family: An expansionist theory. *American psychologist* 56: 781.
- Baron RM and Kenny DA. (1986) The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology* 51: 1173.
- Bianchi SM, Milkie MA, Sayer LC, et al. (2000) Is anyone doing the housework? Trends in the gender division of household labor. *Social forces* 79: 191-228.
- Bird CE. (1999) Gender, household labor, and psychological distress: The impact of the amount and division of housework. *Journal of health and Social Behavior*: 32-45.
- Blake J. (1981) Family size and the quality of children. *Demography* 18: 421-442.
- Carr D and Springer KW. (2010) Advances in families and health research in the 21st century. *Journal of marriage and family* 72: 743-761.
- Daly M. (2000) A fine balance: Women's labor market participation in international comparison. *Welfare and work in the open economy* 2: 467-510.
- Dereuddre R, Missinne S, Buffel V, et al. (2014) Gender specific effects of financial and housework contributions on depression: A multi-actor study among three household types in Belgium. *Health Sociology Review* 23: 78-90.
- Esping-Andersen's G. (1990) The three worlds of welfare capitalism. *Cambridge: Polity*.
- Evenson RJ and Simon RW. (2005) Clarifying the Relationship Between Parenthood and Depression*. *Journal of health and Social Behavior* 46: 341-358.
- Grönlund A and Öun I. (2010) Rethinking work-family conflict: dual-earner policies, role conflict and role expansion in Western Europe. *Journal of European Social Policy* 20: 179-195.
- Hagqvist E, Gådin KG and Nordenmark M. (2012) Division of labor, perceived labor-related stress and well-being among European couples. *Open Journal of Preventive Medicine* 2: 452.
- Helbig S, Lampert T, Klose M, et al. (2006) Is parenthood associated with mental health? *Social psychiatry and psychiatric epidemiology* 41: 889-896.
- Hoffman LW and Hoffman ML. (1973) The value of children to parents.
- Huijts T, Kraaykamp G and Subramanian S. (2013) Childlessness and psychological well-being in context: A multilevel study on 24 European countries. *European Sociological Review* 29: 32-47.
- Imai K, Keele L and Tingley D. (2010) A general approach to causal mediation analysis. *Psychological methods* 15: 309.
- Javornik J. (2014) Measuring state de-familialism: Contesting post-socialist exceptionalism. *Journal of European Social Policy* 24: 240-257.
- Johnson DR and Wu J. (2002) An Empirical Test of Crisis, Social Selection, and Role Explanations of the Relationship between Marital Disruption and Psychological Distress: A Pooled Time-Series Analysis of Four-Wave Panel Data. *Journal of marriage and family* 64: 211-224.

- Leitner S. (2003) Varieties of familialism: The caring function of the family in comparative perspective. *European societies* 5: 353-375.
- Lewis J, Campbell M and Huerta C. (2008) Patterns of paid and unpaid work in Western Europe: gender, commodification, preferences and the implications for policy. *Journal of European Social Policy* 18: 21-37.
- Mastekaasa A. (1992) Marriage and psychological well-being: Some evidence on selection into marriage. *Journal of Marriage and the Family*: 901-911.
- Mills M, Rindfuss RR, McDonald P, et al. (2011) Why do people postpone parenthood? Reasons and social policy incentives. *Human reproduction update* 17: 848-860.
- Mirowsky J and Ross CE. (1992) Age and depression. *Journal of health and Social Behavior*: 187-205.
- Mistry R, Stevens GD, Sareen H, et al. (2007) Parenting-related stressors and self-reported mental health of mothers with young children. *American Journal of Public Health* 97: 1261-1268.
- Nguyen QC, Osypuk TL, Schmidt NM, et al. (2015) Practical guidance for conducting mediation analysis with multiple mediators using inverse odds ratio weighting. *American journal of epidemiology* 181: 349-356.
- Nomaguchi KM. (2012) Parenthood and psychological well-being: Clarifying the role of child age and parent-child relationship quality. *Social science research* 41: 489-498.
- Nomaguchi KM and Milkie MA. (2003) Costs and rewards of children: The effects of becoming a parent on adults' lives. *Journal of marriage and family* 65: 356-374.
- Pollmann-Schult M. (2014) Parenthood and Life Satisfaction: Why Don't Children Make People Happy? *Journal of marriage and family* 76: 319-336.
- Preacher KJ. (2015) Advances in mediation analysis: A survey and synthesis of new developments. *Annual Review of Psychology* 66: 825-852.
- Pudrovska T. (2008) Psychological implications of motherhood and fatherhood in midlife: Evidence from sibling models. *Journal of marriage and family* 70: 168-181.
- Radloff LS. (1977) The CES-D scale: A self-report depression scale for research in the general population. *Applied psychological measurement* 1: 385-401.
- Ross CE, Mirowsky J and Huber J. (1983) Dividing work, sharing work, and in-between: Marriage patterns and depression. *American Sociological Review*: 809-823.
- Salgado H, Haviland I, Hernandez M, et al. (2014) Perceived discrimination and religiosity as potential mediating factors between migration and depressive symptoms: a transnational study of an indigenous mayan population. *Journal of Immigrant and Minority Health* 16: 340-347.
- Schober P and Schmitt C. (2017) Day-care availability, maternal employment and satisfaction of parents: evidence from cultural and policy variations in Germany. *Journal of European Social Policy*: 0958928716688264.
- Sigle-Rushton W and Waldfogel J. (2007) The incomes of families with children: A cross-national comparison. *Journal of European Social Policy* 17: 299-318.
- Simon RW. (2002) Revisiting the Relationships among Gender, Marital Status, and Mental Health 1. *American journal of sociology* 107: 1065-1096.
- Sjöberg O. (2004) The role of family policy institutions in explaining gender-role attitudes: a comparative multilevel analysis of thirteen industrialized countries. *Journal of European Social Policy* 14: 107-123.
- Spence NJ. (2008) The long-term consequences of childbearing physical and psychological well-being of mothers in later life. *Research on Aging* 30: 722-751.
- Sperlich S, Arnhold-Kerri S and Geyer S. (2011) What accounts for depressive symptoms among mothers? The impact of socioeconomic status, family structure and psychosocial stress. *International journal of public health* 56: 385.
- Stier H, Lewin-Epstein N and Braun M. (2012) Work-family conflict in comparative perspective: The role of social policies. *Research in Social Stratification and Mobility* 30: 265-279.
- Teghtsoonian K. (2009) Depression and mental health in neoliberal times: A critical analysis of policy and discourse. *Social Science & Medicine* 69: 28-35.

Van de Velde S, Bracke P and Levecque K. (2010) Gender differences in depression in 23 European countries. Cross-national variation in the gender gap in depression. *Social Science & Medicine* 71: 305-313.

Wang JL. (2004) The difference between single and married mothers in the 12-month prevalence of major depressive syndrome, associated factors and mental health service utilization. *Social psychiatry and psychiatric epidemiology* 39: 26-32.

i The ESS questionnaire provides no information on the sex of the partner. Therefore, we have assumed that the partners are of opposite sex.

ii Some waves of ESS include detailed information about the time devoted to unpaid work such as caring for children or household chores. Unfortunately, this information is not available for the specific waves where measures of depression are included. Hence, we assume that individuals who are not involved in paid work take responsibility for unpaid work. Nevertheless, previous research on gendered division of household duties has taken a similar approach and proved it to be policy-relevant (see e.g. Lewis et al., 2008).

iii More detailed analyses show that this association is strong and statistically significant for parents of children who left parental home, and with the exception of men in the explicit familialistic regime it is not statistically significant for parents of children who reside in parental home. The results of these analyses are available from authors upon request.