Child health conditions and parental separation risk

Introduction and background

Children's health conditions may increase the risk of parental separation (see Lyngstad and Jalovaara 2010), particularly through increased parental stress, financial distress, and relationship conflict (Botha et al. 2019; Reichman et al. 2004; Schermerhorn et al. 2012). However, previous research on this association has yielded mixed results (Fallesen and Breen 2016; Namkung et al. 2015; Reichman et al. 2004; Schultz et al. 2009). There is much to suggest that the association may vary considerably by the type of health conditions, as some conditions that are examined in the literature are more likely to be endogenous than others, so that associations with parental separation could reflect reverse causality. Furthermore, effects may vary by parents' marital status (Corman and Kaestner 1992), and socioeconomic status (SES) (Rowe et al. 2016).

In this study, we examine the association between child health conditions and parental separation risk. To do so, we categorize ten health conditions into three groups of severity: life threatening, not life threatening but severe, and less severe conditions. In addition, we test whether the effects vary by marital status, and family SES. These analyses of categorized health conditions and additional moderation analyses may provide valuable insights into the mixed findings in the literature on the association between children's health and parental separation risk. It is possible that certain child health conditions make parents more likely to stay together, while others increase the risk of separation. Moreover, within each group of health conditions, associations may vary by marital status and SES.

Considering the moderation of effects by SES in particular yields potential to provide valuable insights into the social stratification of the association between child health and family dynamics. Given the established negative effects of parental separation on child health (see Amato 2000; Panico et al. 2019), children with health problems may be cumulatively disadvantaged if their parents are also more likely to separate (see Corman and Kaestner 1992; Joesch and Smith 1997; Mauldon 1992; Reichman et al. 2004). Therefore, it is particularly important to examine whether the effect of children's health on parental separation risk varies as a function of sociodemographic or resource-related characteristics.

In our study, we aim to examine the association between children's health and the risk of parental separation among families in Finland. We follow the children and their parents longitudinally throughout their childhood, from 0 to 17 years of age, which allows us to track the timing of both the onset of the children's health conditions and the parental separation down to the exact year. We consider ten different chronic somatic conditions that we group into three groups of severity and that we can measure using register-based information on hospitalizations and medication reimbursement. We estimate hazard ratios based on Cox proportional hazard models with time-varying covariates. Specifically, we examine the hazards of parental separation at several points in time, both before and after the diagnosis. This allows us to determine whether there are anticipation effects associated with specific health conditions. Additionally, we examine the extent to which the association between children's health conditions and parental separation risk varies by parental marital status and SES.

Analytical approach

Data

In our study, we use Finnish total register data on the biological parents of all Finnish children born in 1986-1991 and residing in Finland at the end of 2000. Information on children's and parents' health, parental relationship status (cohabitation or marital status), and various demographic and socioeconomic factors of parents and children was obtained by linking data from different registers combined by Statistics Finland. The analytical sample was restricted to parents who were cohabiting or married at the birth of their first child, and we kept only those observations where we were able to follow the child throughout their entire childhood (ages 0 to 17). Following these restrictions, our final analytical sample consists of 363,873 pairs of Finnish parents.

Variables

Our primary focus is on parental separation as an outcome. Given the increasing prevalence of cohabitation, we include both married couples and cohabiting couples (Smock and Schwartz 2020). In cases where couples later divorced, we use the year in which cohabitation ended as the reference point for separation. The observation period

for parents who separated ends with the year of separation. Conversely, we follow all parents who did not separate until their first child reached adulthood from the birth of that child until age 17, allowing us to capture their entire family trajectory within this time frame. Our focus on the first child is motivated by the goal of enabling comparability across families.

To capture heterogeneity in the effects of children's health conditions, we classified a total of 10 physical health conditions into three categories: life threatening conditions (cancer), severe but not life threatening conditions (epilepsy, diabetes, inflammatory bowel disease, rheumatoid arthritis, chronic kidney disease), and less severe conditions (allergies, atopic dermatitis, chronic/repeated ear infections, coeliac). The reference category in each case represents those families in which the child has none of the health condition throughout childhood.

Method

In order to assess the impact of children's health conditions on the risk of parental separation, we employed proportional hazard models as introduced by Cox (1972). First, in order to include time-varying covariates, we split the data into annual spells, following the recommendations by Jann (2004). In our application the model is then specified as presented by Blossfeld et al. (2019):

$$r_k(t) = h_k(t)\, exp\{ A^{(k)}(t)\alpha^{(k)}\}$$

Here, $r_k(t)$ is the transition rate at child age t for the parental transition from living together to being separated (state k). The unspecified baseline rate for this transition is $h_k(t)$; $A^{(k)}(t)$ is a vector of the covariates specified for the transition into the separation state k; and $a^{(k)}$ is a vector of associated coefficients. The covariate that serves as the main independent variable in our models is a categorical variable with six expressions, referring to time points before and after the firstborn child was first diagnosed with a specific health condition category.

Preliminary findings

As shown in Table 1, 29% of parents whose child does not have one of the health conditions we investigate separated during the firstborn child's childhood. This proportion is lower only in the group of families with children with a life-threatening health condition (27.3%). In contrast, we see a higher rate of parental separation in families in which the child has a less severe (31.1%) or severe (29.8%) health condition.

Table 1: Descriptive statistics by children's health condition

	No condition		Less severe condition		Severe condition		Life threatening condition	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Parental separation during childhood (0/1)	0.290	0.454	0.310	0.463	0.298	0.457	0.273	0.446
Parents married (0/1)	0.754	0.431	0.710	0.454	0.749	0.433	0.755	0.430
Parental education								
Basic education (0/1)	0.053	0.225	0.040	0.195	0.044	0.206	0.045	0.208
Secondary education (0/1)	0.651	0.477	0.610	0.488	0.622	0.485	0.634	0.482
Bachelor degree or higher (0/1)	0.296	0.456	0.350	0.477	0.334	0.471	0.320	0.467
N (individuals)	325,291		23,700		13,843		1,039	
N (person-years)	6,010,596		440,907		258,544		19,453	

As shown by the hazard ratios in Figure 1, the risk of separation is significantly higher in families with a child with a less severe condition already in the two years before the first diagnosis compared to families with healthy children. The reason for this could be that the less severe diseases tend to be endogenous or that symptoms are already present in the years before the first medical diagnosis, which could increase parental stress. The risk

remains significantly higher in the year of diagnosis and up to two years later. From three years after diagnosis, however, there is no longer any significant difference in the risk of parental separation.

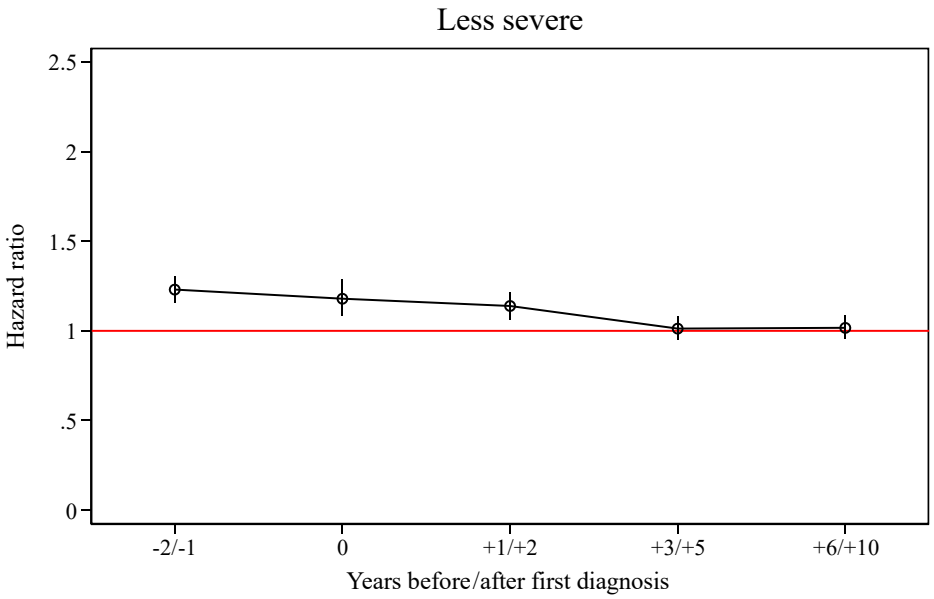

Figure 1: Parental separation risk with less severe children's health conditions

A slightly higher risk of separation already in the two years before the first diagnosis is also evident in families with children who are diagnosed with severe health conditions, but this is less pronounced than in the less severely ill children, as shown in Figure 2. However, the reasons for this could be similar to those for the families with less severely ill children. In addition, parents of children with severe conditions also show a significantly increased risk of separation in the year of diagnosis and in the two years thereafter compared to those families whose child is healthy. As with less severe conditions, parents of severely ill children are no more at increased risk of separation compared to parents of children without a health condition from three years after the initial diagnosis.

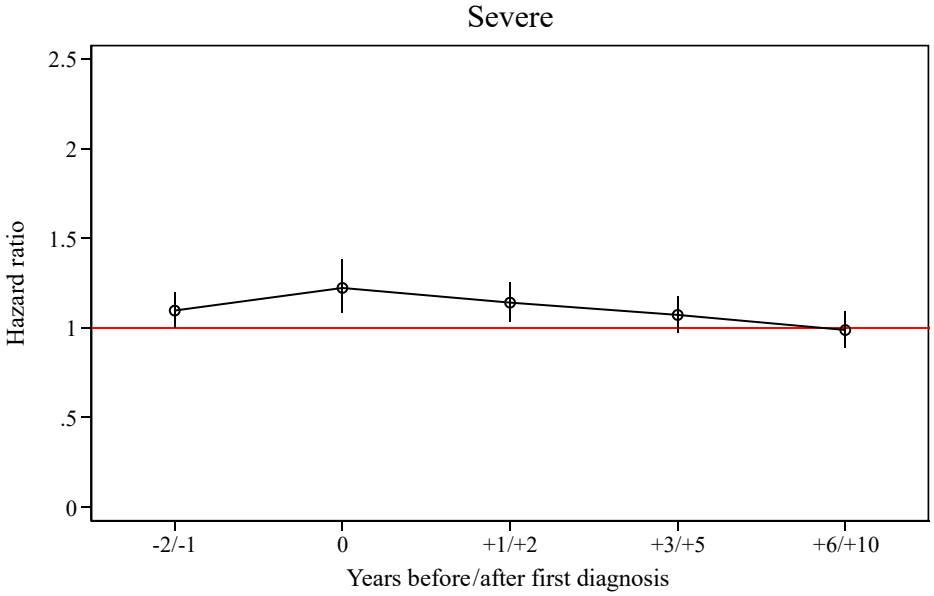

Figure 2: Parental separation risk with severe children's health conditions

Figure 3 shows that parents of children with a life-threatening health condition (cancer) do not differ from parents of health children in terms of their risk of separation in the years before the first diagnosis. In contrast to less severe and severe conditions, however, parents of children with cancer have a significantly lower risk of separation in the year of diagnosis than parents of children without a health condition. However, while the risk of separation of parents with a child with cancer in the two years after the first diagnosis does not differ from parents of healthy children, the risk of separation in the three following years is significantly increased. This could indicate that conflicts in the family are postponed and do not negatively affect the stability of the parental relationship until several years after the diagnosis.

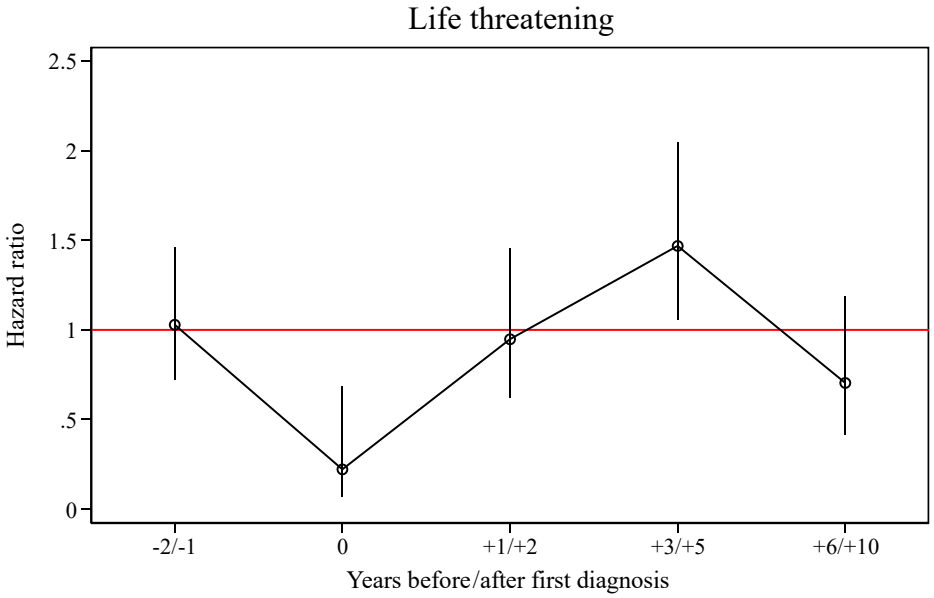

Figure 3: Parental separation risk with life threatening children's health conditions

Overall, we find that in the year of diagnosis of less severe and severe health conditions in children, the risk of separation of parents is significantly higher compared to parents of healthy children, while it is significantly lower for life threatening conditions, where the relationship tends to be strengthened. In addition, parents of children with less severe and severe conditions each show a significantly increased risk of separation already in the two years before the first diagnosis. I a next step, we plan to build on these findings to examine the extent to which parental SES and marital status may moderate these effects to gain deeper insights into the social stratification of the impact of child health conditions on parental separation risk.

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