THE HIDDEN COST OF FOSTER CARE: NEW EVIDENCE ON THE INTER-GENERATIONAL TRANSMISSION OF FOSTER CARE EXPERIENCES

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Study Paper No. 106

Published by:
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February 2016
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Abstract

This study investigates the intergenerational transmission of foster care, to test the extent to which an overrepresentation of children of foster care alumni in a group of children in care remains after controlling for parents’ additional resources (such as criminal history, crime and labor market attachment). For this purpose we use administrative data from Statistics Denmark, which we analyse using simple descriptive statistics and probit models. Results show, that while children of foster care alumni are approximately 10 times as likely as other children to experience foster care, this overrepresentation is halved when we control for parental resources.
Introduction

The extensive literature on foster care provides solid evidence of the disadvantages of children placed in out-of-home care. Not only is their foster care experience a direct result of significant individual or family level problems (e.g. Berrik et al, 1993; Berger, 2006; Barth et al, 2006; Ehrle & Geen, 2002; Yampolskaya et al., 2007; Chin & Phillips, 2004; Franzén & Vinnerljung, 2006; Viner & Taylor, 2005; Sidebotham et al, 2002), individuals with childhood experiences of out-of-home care are also very likely to fall victims of a range of negative outcomes in adulthood (Cheung & Heath, 1994; Colton & Heath, 1994; Jackson, 1994; Courtney et al., 2001; Barth, 1990; Vinnerljung, 2005; de Château, 1990; Hjern et al, 2004; Barth & Blackwell, 1998; Vinnerljung & Ribe, 2001).

Less is known about the intergenerational transmission of foster care, even if the importance of the topic reflect not only the significant individual and social costs of placing children in out-of-home care, but also the detrimental effects on parents of having a child removed from home (Fallesen, 2013). From the parallel literature on the parent/child correlation in experiences with abuse we know that as many as 30 percent of children of abused parents become victims of abuse (Fusco, 2015). However, one of the main purposes of foster care is to remove children from such disadvantaged environments and to help them build skills to live less disadvantaged lives. In fact, in many countries foster care has the stated purpose of strengthening and securing the normal functioning of children in care to the extent that their lives and possibilities are comparable to the lives of children with no foster care experiences (as described in e.g. §46 in the Danish Act of Social Services). This would also imply that foster care alumni are as likely (or little likely) as any other parent to have their own children placed in care, and that we should expect the parent/child correlation in foster care experiences to be significantly lower than the parent/child correlation in abuse.

The overall childhood risk of experiencing foster care is approximately 5 percent (found in various contexts, see Fallesen, Emanuel & Wildeman, 2014; Wildeman & Emanuel, 2013; Wildeman & Waldfogel, 2014), however according to the few existing studies on the intergenerational transmission of foster care, as many as 8 to 22 percent of all children of foster care alumni spent part or all of their childhood in out-of-home care (Jackson et al, 2015; Pecora et al, 2010; Courtney et al, 2010). Thus, compared to the average child, children of foster care alumni are overrepresented by a factor 1.6 to 4.4 in the group of children in foster care.

However, in learning about this share, two concerns spring to mind. First, the mere range of the estimate presented in previous studies is a strong indication that this topic deserves further attention. The samples used for acquiring these estimates are relatively small, and represent select groups of foster care alumni, possibly biasing the results. Second, we need to consider whether the placement risk of the average child is a useful benchmark for children of foster care alumni. While time spend in foster care (hopefully) improve the life outcomes of the foster care alumni, these individuals may still
end up with fewer resources than the average person, simply because they have had a more disadvantaged point of departure. At the same time, we know that children from low resource families have an increased risk of experiencing foster care, and the fewer resources of the foster care alumni will then almost automatically lead to higher risk of foster care among their children – not because they are foster care alumni, but because they have fewer resources. To understand the extent of the intergenerational transmission of foster care, it is therefore crucial that we compare the risk of foster care among children of foster care alumni to relevant groups with similar levels of resources and thus similar initial placement risks.

Hence, to improve our knowledge in this field, our study provides new evidence on the intergenerational transmission of foster care. For these purpose, we use population data from administrative sources, which we analyze using descriptive statistics and probit models. It adds to existing knowledge in two ways. First it presents evidence based on population data that does not suffer from problems pertaining to sample selection bias or attrition bias, and which allows us to fully understand the consequences of the steps we take to select a useful sample. And second, it tests the effect of controlling for important disadvantages of the foster care alumni on the correlation between parents’ foster care experience and children’s risk of experiencing foster care.

Mechanisms

The literature on the intergenerational transmission of disadvantages such as experiences with childhood abuse and foster care presents several reasons why we should expect an overrepresentation of children of foster care alumni in the group of children in foster care.

First, according to the social learning perspective, children observe their parents’ behaviors – both the positive and the negative – and form rules regarding their own behavior based on these observations. If this behavior is accompanied by rationalizing verbalizations, children are particularly likely to come to view their parents’ behavior as normative (Dunlap et al, 2002; McWey et al, 2012; Finzi-Dottan & Harel, 2014), and to imitate this behavior when they become parents themselves. This mechanism will increase the likelihood that foster care is intergenerationally transmitted. Not only may the children imitate the part of their parents’ behavior which caused the problems leading to foster care, they may also be more likely to view foster care as a solution to such problems, and to appreciate this type of family intervention (this may be particularly true in the Danish context where citizens are less reluctant in accepting help from the government compared to other contexts). Also, case workers may be more observant of foster care alumni, based on the expectation that their background negatively affects their parenting skills and they may therefore be more likely to notice symptoms of neglect and maltreatment among this group. This will then increase foster care among the children of foster care alumni even if their problem load is no different from that of other children (Fusco, 2015).
Second, attachment theory builds on the same premise that parental behavior is transmitted to children, but this perspective claims that transmission of negative parenting styles is particularly likely when the child lacks or has an incoherent memory of the behavior (Kaufman & Zigler, 1989): The coherent recollection of negative parenting styles helps the child identify similar negative parenting styles in his or her own behavior and enables reflection on possible alternatives to this behavior. In contrast, incoherent recollection limits the child’s understanding of such similarities and reduces the potential for reflection. This then increases the probability that the child imitates the negative parenting style (Vondra & Belsky, 1993). Attachment theory implies that children who are removed from home before they have the cognitive capacity to understand their parents’ abuse and neglect – but after they have fallen victims of this behavior - may be more likely to expose their own children to same type of behavior.

Third, the resource perspective suggests that foster care alumni experience difficulties transitioning properly into adulthood and into parenthood due to lack of personal and social resources. Young people, who have left home, still tend to rely on their parents for emotional, social and financial support. However, to foster care alumni, such support is often unavailable or limited, either because of poor parent-child relationships, or because of parents’ low resources. In addition, the foster care alumni are likely to have fewer personal resources for coping with the challenges of living alone, because adverse childhood experiences has reduced their overall abilities to cope with stress and transitions. With such lack of network and individual resources, foster care alumni face a stronger challenge in acquiring “harder” resources, such as educational skills, permanent labor market affiliations and stable income, and it increases their risk of engaging in delinquent behavior. This lack of resources may furthermore limit their abilities as parents; they are less mentally prepared to handle the stress of parenting, and they have fewer material resources for handling the parenthood (Courtney & Hughes-Huering, 2005; Geiger & Schelbe, 2014). From previous studies, we know that children of low resources parents are more likely to experience foster care than children of parents with more resources (Andersen & Fallesen, 2010), and the lack of resources among foster care alumni may therefore increase the risk that their children are placed in out-of-home care.

The three explanations illustrate two main routes through which parents’ foster care experience increases the risk that their children experience foster care. One route is through the parenting styles as suggested by the social learning perspective and attachment theory, where foster care alumni replicate the negative behavior of their parents, and another is through the lack of both coping skills and palpable resources such as education and a stable labor market affiliation, that often characterize this group of individuals according to the resource perspective. And while the lack of resources, as explained, reflect their foster care experience, we improve our understanding of the reasons for the possible overrepresentation of children of foster care alumni in the group of children in foster care, by separating it out. A clearer understanding of the important routes will improve our possibilities of
targeting the group through interventions, and of reducing the intergenerational transmission of foster care.

Our empirical analysis therefore tests the robustness of the correlation between parents’ and children’s foster care experience to the inclusion of factors which controls for the resource levels of the foster care alumni. This is a first and important step to improving our knowledge on the mechanisms though which foster care is intergenerationally transmitted. Importantly, our data mainly allows for a test of the importance of palpable resources.

Data

In Denmark all residents have a unique personal number that identifies the resident in many different aspects; this includes benefits from the welfare system, educational background, employment status, information on foster care placements etc. This data is collected by Statistics Denmark on an annual basis, and are made available for statistical and research purposes. The main part of this data is available from 1980 onwards, the data on foster care placements however is available from 1977 to 2010. The personal numbers allow us to connect information across registers and allow us to connect families.

Our sample

With our interest in the intergenerational transmission of foster care, our analysis benefits from the possibility of linking family members in the registers. Importantly, though, our analyses are restricted on the one hand, by the fact that the register on foster care stretch back no further than 1977 and ends in 2010, and, on the other hand, our need to have information on parents’ foster care experience for their entire childhood (0-18 years) and to observe their children for sufficient time to know whether they have experienced foster care.

Given these constraints, we construct our sample as follows: From the full sample we select the 1977 cohort for our first generation - the parent generation - since this is the first cohort that we may observe during their entire period at risk of foster care (e.g. from they are born until they turn 18 years old). This includes 62,159 individuals (31,780 men) of which 5.8 % (3,575) have had at least one out-of-home experience before turning 18. We then link these individuals to their children (our second generation, the child generation), and the main unit in our data is now parent-child dyads. Notice that the same parent may appear more than once in the data if he or she has more children in the relevant age groups.

Ideally we would want to also observe the second generation for as long as they are at risk of foster care – from they are born until they turn 18. However, this would require that parents (born in 1977) had the child at age 15 (in 1992), which is very uncommon in Denmark. Instead we settle with
observing foster care experiences of the second generation during their entire preschool age (until they turn 6 years old), which implies that we reduce our sample to only include parent-child dyads where the child was born before 2005. With these restrictions our final sample consists of 10,543 mothers-child dyads and 7,494 fathers-child dyads. All parents were no more than 27 years old when having their child and all the children are born in 2004 or earlier. In the analyses we split the sample by parent gender.

Sample generalizability?

Since not all individuals in the 1977 cohort who end up having one or more children have had their first child before 2005, and since parents who have children before age 27 are likely to differ from other parents, our results will apply to select groups of individuals. However, with information from the registers we may calculate the extent of this “selection”.

First, if we assume that the fertility behavior of the 1977 cohort resembles that of other, older cohorts who have completed their fertility (say the 1960 cohort), we may compare the observed share of the 1977 cohort who have become parents in 2005 with the share of such older cohorts who are parents in that year, and get an estimate of the expected completed fertility of the 1977 cohort. Given such calculations, our sample consists of approximately 40 percent of the women in the 1977 cohort who eventually becomes mothers, and approximately 30 percent of the men in the 1977 cohort who become fathers.

Second, if we compare the age distribution for first time parents in the 1977 cohort with and without foster care experience, we may test whether there is an overrepresentation of foster care alumni in our sample. For this purpose we look at any first time parenthood in the 1977 cohort which occurred before 2015, and find that while 72 and 53 percent of foster care alumni mothers respectively fathers had their first child before age 27, this only applies to 45 respectively 27 percent of non-foster care alumni mothers and fathers. These shares are clear indications of the different fertility behavior of the foster care alumni.

Our sample then consists of a select group of parents (both with and without personal foster care experience), which must be kept in mind when interpreting our results. Importantly, though, our sample selection procedure is likely to have homogenized our analytical sample, such that we are likely to underestimate the overrepresentation of children of foster care alumni in the group of children in foster care. Still, it is our claim that our results are representative of much broader groups of foster care alumni that what is seem in previous studies, and that the transparency of our sample selection procedure and its consequences improve the usefulness of our result.
Dependent variable: Foster care placement of child during preschool (0-6 years)

With our focus on the intergenerational transmission of foster care and given our sample selection criteria specified above, our variable of interest is an indicator taking the value 1 if the child experiences foster care during age 0 to 6. 324 children in our sample experience foster care during the preschool years – 171 girls and 153 boys.

The explanatory variables

Our main independent variable measures parental foster care experience. 2102 of all children (1021 girls and 1081 boys) in the sample have parents with foster care experience. Or vice versa, 8 percent of mothers and 9 percent of fathers have childhood experiences of foster care. Most parents experience foster care during the teenage years. Since Danish children have an average risk of experiencing foster care of 5 percent, foster care alumni are overrepresented in our sample. This overrepresentation is a reflection of our sample selection procedure described above.

As described, we wish to isolate the correlation between parents’ foster care experiences and children’s placement risk, from the correlation between children’s foster care risk and other parental characteristics, which may be more or less prevalent among the foster care alumni. This is to improve our understanding of how low parental resources contribute to the parent-child correlation in foster care experience, to distinguish this element from the actual “effect” of parents’ foster care experience. We therefore prepare a set of explanatory variables to control for socioeconomic factors that affect the probability of ending up in foster care, according to previous studies. These indicators include parents’ income, educational background, employment status, early retirement, criminal behavior, marital status and their labor force status (measured the year before childbirth). Importantly this list does not reflect all important types of resources, since we do not have information on e.g. parents’ coping resources. Still, it represents important palpable resources on which the foster care alumni may differ from other parents, and which we expect affect their children’s placement risk.

Table 1 shows mean and standard deviation of our explanatory variables. In our sample for mothers, 1.5 percent of children have preschool experiences of foster care, whereas this applies to 1.4 percent of children in our sample for fathers. Similarly 9.1 percent of mothers and 9.6 percent of fathers experience foster care at age 0-19. Of these 1.6 percent of mothers and 1.7 percent of fathers has preschool experiences of foster care, however far more - 6.1 percent of mothers and 6.2 percent of fathers - experienced foster care during their teenage years. Last, 1.3 percent of mothers and 1.7 percent of fathers experience foster care at ages 7-11.

Table 1 furthermore shows that average age at childbirth is 24.4 years for mothers and 25 for fathers. A little less than 41 percent of the mothers and less than 37 percent of the fathers has elementary
school as their highest level of completed education, but this may reflect the age at which this indicator is measured, since 31 percent of the mothers and 23 percent of fathers are still studying. Moreover, 31.5 percent of mothers and 37.4 percent of fathers are single the year prior to having the child, and approximately 70 percent of mothers and 84 percent of fathers are employed. Fathers earn more than mothers (130,000 DKK vs. 77,000 DKK a year), and this may both reflect direct gender difference and gender differences in age at first childbirth. Only 0.1 percent of parents receive early retirement pension, and 3.5 percent of mothers and 1.3 percent of fathers rely on welfare benefits. In terms of their criminal history, fathers are far more active than mothers; 4 percent of fathers but only 0.2 percent of mothers received a prison sentence within the 5 years prior to having a child. Also, 16 percent of fathers but only 4.2 percent of mothers received a criminal law sentence during the same period.

Table 1 - Parent's characteristics the year before childbirth

|                                      | Mother             | Father            |
|--------------------------------------|--------------------|-------------------|
|                                      | Mean               | Standard deviation| Mean               | Standard deviation |
| Child in foster care during preschool | 0.015              | 0.120             | 0.014              | 0.116              |
| Parent in foster care, age 0-18 year | 0.091              | 0.288             | 0.096              | 0.294              |
| Parent in foster care, age 0-6       | 0.016              | 0.127             | 0.017              | 0.131              |
| Parent in foster care, age 7-11      | 0.013              | 0.115             | 0.017              | 0.128              |
| Parent in foster care, age 12-18     | 0.061              | 0.240             | 0.062              | 0.240              |
| Age at childbirth                    | 24.379             | 2.432             | 25.033             | 2.056              |
| Highest completed education elementary school (0/1) | 0.408              | 0.491             | 0.368              | 0.482              |
| Studying (0/1)                       | 0.313              | 0.464             | 0.234              | 0.423              |
| Single parent                        | 0.315              | 0.465             | 0.374              | 0.484              |
| Employed (0/1)                       | 0.704              | 0.457             | 0.839              | 0.368              |
| Income 2014 prices (10,000 DKK)      | 7.711              | 6.641             | 12.969             | 8.837              |
| Early retirement (0/1)               | 0.001              | 0.032             | 0.001              | 0.033              |
| Welfare benefits                     | 0.035              | 0.184             | 0.013              | 0.115              |
| Prison sentence, last 5 years        | 0.002              | 0.040             | 0.041              | 0.199              |
| Any sentenced, last 5 years          | 0.042              | 0.201             | 0.160              | 0.367              |

# observations 15,213 7,494

Results

Table 2 shows the share of children with foster care experience, by parents’ foster care history. The results demonstrate a substantial overrepresentation of children of foster care alumni among children who experience foster care. More than 7 percent of the children with a father from the foster care alumni experience foster care, compared to less than 1 percent of children of fathers with no foster care experience. This is an overrepresentation of more than 6 percentage points. We find a similar
overrepresentation among children of mothers from the foster care alumni of approximately 7 percentage points. Children of foster care alumni are then approximately 10 times more likely to experience foster care than other children.

Table 2: Proportion of children in foster care during preschool, pending parents’ foster care experience

|                      | Mean   | Standard deviation | N  |                      | Mean   | Standard deviation | N  |
|----------------------|--------|--------------------|----|----------------------|--------|--------------------|----|
| Father in foster care|        |                    |    | Mother in foster care |        |                    |    |
| Age 0-18             | 0.0726 | 0.2597             | 716| Age 0-18             | 0.0779 | 0.2681             | 1386|
| Age 0-6              | 0.1069 | 0.3101             | 131| Age 0-6              | 0.088  | 0.284              | 250 |
| Age 12-18            | 0.0672 | 0.2507             | 461| Age 12-18            | 0.083  | 0.275              | 932 |
| Age 7-11             | 0.0565 | 0.2317             | 124| Age 7-11             | 0.044  | 0.206              | 204 |
| No foster care       | 0.0075 | 0.0864             | 6778| No foster care       | 0.008  | 0.090              | 13827|

The increased risk for children of foster care alumni of experiencing foster care could, as stated earlier, arise from two routes. According to the resource perspective, the lower resources of the foster care alumni explain a large part of the variation across the two groups of children (i.e. with and without parents from the foster care alumni). However if the differences between the two groups persists after controlling for important characteristics it may reflect other factors described by the social learning perspective and the attachment theory, such as the parenting behavior of the foster care alumni.

We test the resource perspective by first presenting descriptive evidence of the differences in resources between parents with and without childhood foster care experience. Table 3a and 3b show the statistics, by parents’ gender. The left column shows statistics for parents belonging to the foster care alumni and the right column parents with no foster care experience.

As expected, the foster care alumni has, on average, lower income, lower employment, lower level of education, and they were younger when having their child. Given the strong correlations between parents low socio-economic resources and children’s increased risk of experiencing foster care found in these findings may explain the larger foster care risk of children from foster care alumni.
Table 3a – Mother’s characteristics, year before childbirth

|                          | In foster care | Standard deviation | Not in foster care | Standard deviation |
|--------------------------|----------------|--------------------|--------------------|--------------------|
| Child in foster care during preschool | 0.08           | 0.27               | 0.01               | 0.09               |
| Age at childbirth        | 23.01          | 2.80               | 24.52              | 2.35               |
| Highest completed education elementary school (0/1) | 0.78           | 0.41               | 0.37               | 0.48               |
| Studying (0/1)           | 0.23           | 0.42               | 0.32               | 0.47               |
| Single                   | 0.45           | 0.50               | 0.30               | 0.46               |
| Employed (0/1)           | 0.42           | 0.49               | 0.73               | 0.44               |
| Income, 10,000 DKK (2014 prices) | 4.26           | 5.75               | 8.05               | 6.63               |
| Early retirement (0/1)   | 0.00           | 0.07               | 0.00               | 0.03               |
| Welfare benefits         | 0.12           | 0.33               | 0.03               | 0.16               |
| Prison sentence, last 5 years | 0.01           | 0.08               | 0.00               | 0.03               |
| Any sentenced, last 5 years | 0.14           | 0.34               | 0.03               | 0.18               |

# observations

1,386 | 13,827

Table 3b – Father’s characteristics, year before childbirth

|                          | In foster care | Standard deviation | Not in foster care | Standard deviation |
|--------------------------|----------------|--------------------|--------------------|--------------------|
| Child in foster care during preschool | 0.07           | 0.26               | 0.01               | 0.09               |
| Age at childbirth        | 23.89          | 2.56               | 25.15              | 1.96               |
| Highest completed education elementary school (0/1) | 0.76           | 0.43               | 0.33               | 0.47               |
| Studying (0/1)           | 0.15           | 0.36               | 0.24               | 0.43               |
| Single parent            | 0.51           | 0.50               | 0.36               | 0.48               |
| Employed (0/1)           | 0.60           | 0.49               | 0.86               | 0.34               |
| Income, 10,000 DKK (2014 prices) | 8.23           | 8.03               | 13.47              | 8.77               |
| Early retirement (0/1)   | 0.00           | 0.06               | 0.00               | 0.03               |
| Welfare benefits         | 0.06           | 0.25               | 0.01               | 0.09               |
| Prison sentence, last 5 years | 0.15           | 0.36               | 0.03               | 0.17               |
| Any sentenced, last 5 years | 0.48           | 0.50               | 0.13               | 0.33               |

# observations

716 | 6,778

Results from probit model

With the evidence presented in tables 3a and 3b that the foster care alumni differs from other parents on a range of parameters, a next step is to clarify the extent to which these differences explain the overrepresentation of children of foster care alumni in the group of children in care. For this purpose
we further analyze the parent-child correlation in foster care experience using a regression model, which allows for a straightforward test of how adjusting for these differences affects the size of the correlation. Since our dependent variable takes the value 1 if the child experiences foster care during preschool and 0 otherwise, we use a probit model. For all models, we present marginal effects. The associated probit coefficients are available from the authors on request.

Our main independent variables are the group of three dummies for mother’s or father’s placement history presented in table 1 (parental foster care experience during ages 0-6, 7-11 and 12-18), and a global indicator of whether the parent experienced foster care at any point during his or her childhood. We analyze these two sets of independent variables (the three dummy variables and the global indicator) separately and run eight models in total: Four for mothers without and with control variables and four for fathers, without and with control variables. With this strategy we may assess whether the coefficient of our four dummy variables of interest changes as a result of the inclusion of control variables, and whether the socio-economic differences between foster care alumni and other parents explain all or part of their children’s different risks of experiencing foster care.

Table 4a shows our results regarding the mother-child correlation in foster care. Column 1 shows that mother’s foster care experience – at any point during childhood – increases the child’s placement risk by 3.3 percent. From column 3 we learn that the correlation is strongest when the mother has preschool experiences of foster care, even if also foster care at other points during mother’s childhood seems to matter. Importantly, these age-differentiated dummies are not significantly different. Thus, approximately 56 percent of the mother-child correlation in foster care experiences reflects mother’s low resources.
Table 4a. Probit model, marginal effects. Dependent variable: Child in foster care during preschool

|                          | (1)             | (2)             | (3)             | (4)             |
|--------------------------|-----------------|-----------------|-----------------|-----------------|
| Mother in foster care    |                 |                 |                 |                 |
| Age 0-18                 | 0.0330 (12.59)*** | 0.0146 (7.06)*** |                 |                 |
| During preschool         |                 | 0.0351 (8.15)*** | 0.0169 (4.51)*** |                 |
| Age 7-11                 | 0.0233 (4.30)*** | 0.0097 (1.96)   |                 |                 |
| During teenage years     | 0.0340 (11.86)*** | 0.0149 (6.41)*** |                 |                 |
| Controls (Mother’s       |                 |                 |                 |                 |
| characteristics)         |                 |                 |                 |                 |
| Age at childbirth        |                 | -0.0015 (-3.65)*** |                 | -0.0015 (-3.64)*** |
| Highest completed        |                 | 0.0089 (3.17)**  | 0.0089 (3.18)**  |                 |
| education elementary     |                 | -0.0076 (-3.44)*** |                 | -0.0075 (-3.42)*** |
| school                   |                 |                 |                 |                 |
| Student                  |                 | 0.0024 (1.29)   | 0.0024 (1.27)   |                 |
| Single                   |                 | -0.0094 (-3.34)*** |                 | -0.0095 (-3.37)*** |
| Employed                 |                 |                 |                 |                 |
| Income, 10,000 DKK (2014 | -0.0014 (-4.07)*** |                 | -0.0014 (-4.07)*** |                 |
| prices)                  |                 |                 |                 |                 |
| Early retirement         | 0.0323 (3.20)*** | 0.0317 (3.16)**  |                 |                 |
| Welfare benefits         | 0.0092 (3.51)*** | 0.0091 (3.46)*** |                 |                 |
| Prison sentence, last 5  |                 | -0.0154 (-0.99) |                 | -0.0153 (-0.98) |
| years                    |                 |                 |                 |                 |
| Any sentenced, last 5    | 0.0142 (5.53)*** | 0.0140 (5.46)*** |                 |                 |
| years                    |                 |                 |                 |                 |
| Same gender child        | 0.0019 (1.05)   | 0.0019 (1.08)   |                 |                 |
| Observations             | 15213           | 15180           | 15213           | 15180           |
| Pseudo R²                | 0.104           | 0.266           | 0.106           | 0.266           |

*p < 0.05, **p < 0.01, ***p < 0.001

The explanatory variables have the expected signs with factors as increased age at childbirth, studying, being employed and higher income, lowers the risk of children ending up in foster care. In contrast, lack of education since elementary school, being a single parent, relying on welfare benefits and engaging in criminal activities increase the risk of that one’s child experience foster care. Given the insignificant effect of child gender, there does not seem to be a gender difference in placement risk.

Models for the father-child present the same overall picture, as shown in Table 4b. The marginal effect of fathers foster care experience at any point during his childhood is 3.12 percent, however the marginal effect drops to 1.44 percent when we include our set of controls. In these models, father’s characteristics explain 54 percent of the father-child correlation in foster care experiences. From
column 3 and 4 we learn, that the risk of foster care is largest for children of fathers with foster care experience during preschool, as their increase in foster care risk is around 1.9 percentage points. The risk of children from foster care alumni ending up in foster care is a little smaller if the fathers experienced foster care at ages 12-18 and 7-11 at respectively 1.4 and 1.2 percentage point. The dummies on fathers foster care history are not significantly different.

Table 4b. Probit model, marginal effects. Dependent variable: Child in foster care during preschool

| Father in foster care | (1)       | (2)       | (3)       | (4)       |
|-----------------------|-----------|-----------|-----------|-----------|
| Age 0-18              | 0.0312    | 0.0144    | 0.0187    | 0.0136    |
|                       | (8.62)*** | (4.96)*** | (3.92)*** | (4.00)*** |
| During preschool      | 0.0379    | 0.0270    | 0.0121    | 0.0124    |
|                       | (6.68)*** | (4.23)*** | (2.05)*   | (2.26)*   |
| Age 7-11              | 0.0270    | 0.0121    | 0.0132    | 0.0130    |
|                       | (4.23)*** | (2.05)*   | (4.00)*** | (1.49)    |
| During teenage years  | 0.0298    | 0.0136    | 0.0124    | 0.0130    |
|                       | (7.51)*** | (4.00)*** | (2.26)*   | (1.49)    |

| Controls (father’s characteristics) | (1)       | (2)       | (3)       | (4)       |
|-------------------------------------|-----------|-----------|-----------|-----------|
| Age at childbirth                   | -0.0025   | -0.0026   | -0.0026   | -0.0026   |
|                                     | (-4.45)***| (-4.45)***| (-4.45)***| (-4.45)***|
| Highest completed education         | 0.0095    | 0.0095    | 0.0132    | 0.0132    |
| elementary school                   | (2.69)**  | (2.69)**  | (0.82)    | (0.82)    |
| Student                             | -0.0058   | -0.0060   | -0.0060   | -0.0060   |
|                                     | (-1.74)   | (-1.79)   | (-1.79)   | (-1.79)   |
| Single                              | 0.0027    | 0.0027    | 0.0132    | 0.0132    |
|                                     | (0.99)    | (1.00)    | (0.82)    | (0.82)    |
| Employed                            | -0.0060   | -0.0058   | -0.0058   | -0.0058   |
|                                     | (-1.74)   | (-1.67)   | (-1.67)   | (-1.67)   |
| Income, 10,000 DKK (2014 prices)   | -0.0003   | -0.0003   | -0.0003   | -0.0003   |
|                                     | (-1.33)   | (-1.34)   | (-1.34)   | (-1.34)   |
| Early retirement                    | 0.0133    | 0.0133    | 0.0132    | 0.0132    |
|                                     | (0.84)    | (0.82)    | (0.82)    | (0.82)    |
| Welfare benefits                    | 0.0127    | 0.0124    | 0.0124    | 0.0124    |
|                                     | (2.30)*   | (2.26)*   | (2.26)*   | (2.26)*   |
| Prison sentence, last 5 years       | 0.0062    | 0.0063    | 0.0063    | 0.0063    |
|                                     | (1.48)    | (1.50)    | (1.50)    | (1.50)    |
| Any sentenced, last 5 years         | 0.0051    | 0.0050    | 0.0050    | 0.0050    |
|                                     | (1.52)    | (1.49)    | (1.49)    | (1.49)    |
| Same gender child                   | -0.0030   | -0.0029   | -0.0029   | -0.0029   |
|                                     | (-1.18)   | (-1.15)   | (-1.15)   | (-1.15)   |

| Observations                      | 7494      | 7494      | 7494      | 7494      |
| Pseudo $R^2$                      | 0.105     | 0.219     | 0.108     | 0.221     |

$t$ statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The explanatory variables have the expected sign with an increase in father’s age at childbirth, studying, being employed and having a higher income lowering the risk of foster care, and factors such as no education, being a single parent, receiving government transfers and criminal behavior increasing the risk of foster care. However, most of these estimates are insignificant at the 5 percent
level, and we only get significant effects from father’s age at childbirth, his relying on welfare benefits and his low education. As also found in the mother-child sample, there is no difference in the risk of foster care placements across child gender. According to existing literature on child-parent interaction fathers interact more with sons than with daughters (e.g. Katzev et al, 1994). The intergenerational transmission of foster care could therefore be gender specific, with father’s childhood foster care experience affecting boys and mother’s experience affecting girls. We test this in our sample, but find no evidence of such gender specific transmission. The results are available from the authors on request.

We have furthermore tested the presence of municipality random effects, as differences in municipalities’ tax base, differences in the quality of the child protection system etc. may inflict on residents’ risk of foster care over and above their own characteristics (Andersen, 2010). We therefore re-specify our model to also include municipality fixed effects, but find no indications that the municipality-level variance improves the model. Also these results are available from the authors on request.

**Conclusion**

Even if one of the explicit purposes of placing a child in foster care is to improve its later outcomes, mounting evidence suggests that foster care alumni still underperforms compared to the average person. They have worse labor market outcomes, they have lower educational attainments, and they experience more social and personal problems. In addition, we have empirical evidence that their children are overrepresented in the group of children in care, even if the quality of this evidence is limited by small sample sizes and very select samples. The ambition of our study has been to test not only the extent of the intergenerational correlation in foster care experience using population data, but also to test the degree to which differences in palpable resources between foster care alumni and other parents explain this overrepresentation.

Our results show that children of foster care alumni are 10 times more likely to experience foster care during their preschool years compared to other children, but that this overrepresentation reduces quite significantly when we control for resources such as parents’ education, income, labor market affiliation, criminal activities etc. Importantly though, we still get significant effects of parents’ foster care experience even after controlling for these different resources. Thus, while part of the increased risk of foster care experienced by the children of the foster care alumni reflect parents’ reduced resources another part is less tangible. Theories in this area – such as the social learning perspective and attachment theory – may explain this remaining part by referring to the parenting skills of the foster care alumni, as these individuals may be likely to either consciously or unconsciously replicate the parenting behavior of their own parents. However the resource perspective would also imply that
besides from the palpable resources used in our analysis, other resources, such as skills for coping with stress and transitions may matter. Unfortunately, our data does not provide meaningful information on neither parenting behavior nor coping skills.

The remaining question is then how to use this knowledge - do we need pay extra attention to the foster care alumni and help and support them in their roles as parents to prevent their children from ending up in foster care? Importantly, though, the knowledge in this area is still limited and a first step would be to further investigate the reasons for the documented overrepresentation of children of foster care alumni in care. Is it parents’ personal coping skills or their parenting behavior which causes the persistent correlation, or do other palpable resources, not included in our study explain more of the variation? In case of the former, it could be viable to consider the independent living programs offered to foster care alumni. While many countries offer such programs, they are often poorly executed and have limited coverage. An improvement in that area may not only help the foster care alumni and their children, but may also turn out to be important social investments in terms of reducing the future cost of needing to sent these children to foster care.
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