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Intergenerational accumulation of social disadvantages across generations in young adulthood

Teemu Vauhkonen^{a,*}, Johanna Kallio^a, Timo M. Kauppinen^b, Jani Erola^a^a University of Turku, Assistentinkatu 7, Turku, Finland^b National Institute for Health and Welfare, Mannerheimintie 166, Helsinki, Finland

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ABSTRACT

We analyze the intergenerational transmission of social disadvantages in the context of the Finnish welfare state. Previous research on intergenerational transmission has typically concentrated on educational attainment, income and social class as separate factors. Researchers commonly measure parental standing using single indicators that are very general and do not address social disadvantage; rather, these single indicators only address socioeconomic status in general. Therefore, we measure both parental disadvantage and children's outcomes using three indicators: dropping out of school after completing compulsory education, unemployment, and receipt of social assistance. We assume that there are differences in how strongly different disadvantage indicators are intergenerationally inherited and how they accumulate across generations. We use high-quality register data from Finland ($n = 157\,135$). Parental information was collected when each child was 15 years old, and the young adulthood outcomes were collected when the child was 22. We analyze data with sibling methods using random-effect linear regression models to study the importance of a disadvantaged background on adulthood outcomes. According to the results, all three social disadvantages are intergenerationally inherited in Finland. Accumulation of disadvantage, receipt of social assistance and dropping out of school after compulsory education are inherited more strongly than unemployment. The lack of economic resources in the family does not explain why other family disadvantages are transferred across generations.

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1. Introduction

This article builds on the long research tradition of intergenerational social mobility, analyzing the associations between parents' and children's social status. Previous studies have shown the persistence of intergenerational transmission of social origin. Regardless of the welfare state in focus, social origin seems to have a strong effect on the social outcomes of children. This applies in the Nordic welfare states as well, even if these countries have rather small income differences and comprehensive welfare benefits, including a free school system and universal high quality day care services for small children (Aaberge et al., 2002; Breen & Luijkx, 2007; Erikson & Goldthorpe, 1992). In this article, we focus on the intergenerational transmission of social disadvantages in Finland instead of social status in general.

Previous research on intergenerational transmission has typically concentrated on educational attainment, social class or

income separately instead of on social disadvantage, addressing only the socioeconomic status in general. While these indicators of social status overlap to a large extent, they also refer to different aspects of an individual's family background. Further, previous results show that indicators of parents' social problems are significantly and independently associated with children's outcomes as adults (Kallio, Kauppinen, & Erola, 2016; Larsen, Jensen, & Jensen, 2014). Therefore, it is likely that by using only a single indicator for socioeconomic status, we miss a substantial component of the family backgrounds role (Bukodi, Erikson, & Goldthorpe, 2014; Erola, Jalonen, & Lehti, 2015; Jaeger & Holm, 2007). In other words, when a single indicator is used, the role of social origin is underestimated, while the role of the used indicator is overestimated.

Additionally, previous studies indicate that all family characteristics are not equally decisive. Compared to a wide range of parental factors, some evidence indicates that (long-term) poverty and receipt of social assistance have the most severe consequences (Bäckman & Nilsson, 2011; Hobcraft & Kiernan, 2001; Kallio et al., 2016). Further, it is often argued that the accumulated disadvantages of parents have extensive intergenerational consequences that can be observed in multiple (negative) outcomes (e.g.,

* Corresponding author.

E-mail address: teemu.vauhkonen@utu.fi (T. Vauhkonen).

Hobcraft, 1998; Kallio et al., 2016; Whelan, Nolan, & Maitre, 2013). Therefore, as much as possible, parental disadvantages should be measured using multiple indicators that are directly related to social disadvantage.

Further, an equally important gap in the research seems to ignore the wide range of possible and sometimes simultaneous outcomes of childhood disadvantages (Davidson, Devaney, & Spratt, 2010; 370). Childhood poverty is the often mentioned example. The low income of parents seems to increase their children's probability of receiving social assistance in adulthood (Kauppinen et al., 2014). Children with poor families also seem to have a higher probability of experiencing unemployment later in life (O'Neill & Sweetman, 1998). In addition, an enormous amount of research has demonstrated that the poorer the family, the higher the likelihood of a child dropping out of school (Bukodi & Goldthorpe, 2013; Wiborg & Hansen, 2009). In summary, as measured by multiple factors, a strong association exists between parental poverty and adulthood disadvantages of their children (Wiborg & Hansen 2009; 389). However, the role of poverty and the significance of other factors related to poverty are unclear.

In this article, we analyze intergenerational transmission of social disadvantages in Finland, concentrating on those at the bottom of the strata and how their disadvantaged positions are inherited from one generation to another. Many studies have shown how different disadvantages, such as dropping out of school (Carbonaro, 1998; Kallio et al., 2016), unemployment (O'Neill & Sweetman, 1998) and the receipt of social assistance (Kauppinen et al., 2014), are inherited from one generation to another. Nonetheless, we do not know how and how strongly these different disadvantages overlap in regards to intergenerational transmission. Further, the extent to which the aggregation of the first generation's disadvantages enhances the accumulation of disadvantages in the next generation remains a largely unanswered question.

We measure the disadvantaged positions of both parents and children using multiple symmetric indicators, albeit at the different age. In this way, we address both shortcomings of the previous literature, using multiple rather than single measurements, and observe disadvantages directly rather than through general indicators of social status. Therefore, instead of educational attainment, occupational class and income, parents' and children's (adult) disadvantages are measured using the following indicators: *dropout immediately after compulsory school (later shortened as school dropout)*, *unemployment and receipt of social assistance*. We look at both of the single indicators and outcomes as well as their accumulation. We are also interested in how these disadvantages are intertwined between generations.

Our research questions are as follows: 1) *how are social disadvantages associated with parental background, as measured by school dropout, unemployment and receipt of social assistance, associated with children's adulthood outcomes as measured by symmetrical indicators?* and 2) *does the accumulation of parents' social disadvantages increase the accumulation of social disadvantages in the next generation?* In addition, we consider the extent to which the intergenerational associations between disadvantages are mediated by the lack of childhood family economic resources, i.e., childhood poverty. In order to accomplish this, we apply high-quality register data from Finland. Using random-effect linear probability and linear regression models, we analyze these data with sibling methods.

2. Mechanisms behind intergenerational transmission of social disadvantage

To better understand the mechanisms that could lead to the intergenerational transmission of social disadvantages, we should

first consider the social inheritance of economic, social and cultural resources (Jaeger & Holm, 2007; Wiborg & Hansen, 2009). In the simplest terms, it may be argued that greater access to any type of resources is advantageous. For instance, highly educated and high-income upper class parents have more resources to assist, guide, finance and secure their children's status in adulthood. The reverse is also true: the aggregated disadvantages of a child's family should be associated with fewer family resources overall, which, in turn, indicates that there will be an aggregation of disadvantages in the next generation.

However, it may also be true that not all resources are equally important. Lack of material and economic resources has been argued to have more severe intergenerational consequences compared to the lack of other resources (Bäckman & Nilsson, 2011; Hobcraft & Kiernan, 2001). Because of this, we study how the lack of material and economic resources are related to intergenerational processes; we call this the *poverty thesis*. This thesis predicts that a family's lack of material and economic resources is the key factor in intergenerational associations and can work as a mediator between disadvantaged family backgrounds and children's outcomes in young adulthood.

As parents play the most important role in the socialization of children, it is worth asking whether disadvantaged parents simply lack essential resources or whether they transfer something intangible (e.g., values, attitudes, behavior models, future goals and information) to their children that negatively impacts the children's future status? This type of *socio-cultural transmission* appears to be fundamentally different from explanations that emphasize the importance of poverty. The former assumes that parents transmit behavioral patterns, attitudes and values to children that are disadvantageous in the long run, whereas the latter posits that the lack of intergenerational transmission actually explains intergenerational associations. Culture is here understood as a residual category of explanations; it does not assume the active role of parents but includes any factors related to family background that are not covered by economic and material cases, similar to Bourdieu's concepts of habitus and cultural inheritance (Bourdieu & Passeron 1977).

It is also possible that the socio-cultural transmission of social disadvantages occurs because children are left without essential resources. For instance, children who have disadvantaged adults as role models may have lower expectations of themselves (Small & Newman, 2001), which may increase their likelihood of ending up in socially disadvantaged positions as adults. In the socio-cultural transmission of disadvantages, both problems – being left without essential resources and parental transmission of disadvantageous habits and information – may occur.

Information differentials seem to play an important role in explaining educational stratification (Werfhorst & Andersen, 2005). Highly educated parents have more knowledge about the value of additional schooling, such as its importance to achieving a professional career. Information may be passed from parents to children either by intentional communication or unintentionally by example. A lack of this information can be associated with the opposite set of conditions, i.e., the inability to use this information either to further one's own career or to improve a child's attainment.

Furthermore, some have suggested that the culture of poverty is the key factor explaining the socioeconomic inheritance of poverty and other social disadvantages (Lewis, 1966; Small, Harding, & Lamont, 2010). The concept refers to social dependency on welfare support, which, to an extent, can be described as a culture when all the socio-cultural mechanisms mentioned above are true: the individual becomes accustomed to the negative stigma associated with such support, learns to use last-resort income schemes, and has no positive role models in terms of work and education (Dean & Taylor-Gooby, 1992). A similar description is associated with the concept of an underclass (Albrekt Larsen, 2006; Katz 2013; Wilson, 1986).

This is also similar to Merton (1968). From a Mertonian perspective, because disadvantaged people lack the means to achieve the goals that are considered valuable in society, they abandon those goals as well as the means to achieve them.

The stigma attached to both unemployment and the receipt of social assistance is based on the shared norm of living off of one's own work (Moffitt, 1983; Mood, 2004). However, if, in one's social environment, unemployment and social assistance receipt are common, the stigma attached to them is likely to fade away (Wiborg & Hansen, 2009; Ellen & Turner, 1997; Wilson, 1986). Similarly, children whose parents have been unemployed and/or recipients of social assistance may see unemployment and social assistance receipt as less stigmatizing, which lowers their threshold of applying for social assistance (Lindbeck, Nyberg, & Weibull, 1999; Moffitt, 1983; Mood, 2004). On the other hand, parents who have received social assistance may also pass information about social assistance to their children when they are adults, which may remove the obstacle of the bureaucratic and means-tested nature of social assistance (See Bertrand et al., 2000; Dahl, Kostøl, Mogstad, 2014).

Previous studies have measured disadvantageous family backgrounds based on multiple indicators, including poverty, social assistance receipt, unemployment, labor market exclusion, early retirement, early parenthood, deviant behavior, bad health, alcoholism, educational failure and receipt of child welfare (e.g., Hobcraft & Kiernan, 2001; Duncan, Ziol-Guest, & Kalil, 2010; Duncan, Yeung, Brooks-Gunn & Smith, 1998; Larsen et al., 2014; Whelan et al., 2013; Wiborg & Hansen, 2009). These factors seem to have independent associations with children's adulthood disadvantages. Earlier research has also indicated that parental poverty seems to predict that children suffer from multiple social problems in adulthood (Wiborg & Hansen, 2009). The results of these studies give us reason to assume that different disadvantages are intertwined. However, based on previous results, we do not know how and how strongly these different disadvantages overlap. Furthermore, intergenerational accumulation of multiple disadvantages has not been measured previously, even if multiple family background variables have been included in a few earlier research designs to explain individual outcomes (c.f. Kallio et al., 2016).

Earlier findings provide hypotheses regarding the expected findings (see Fig. 1). The *poverty thesis* suggests that prevailing economic inequality within society is the primary obstacle for upward mobility of the children with disadvantaged family backgrounds. The family's lack of material and economic resources is assumed to have far reaching consequences which may increase the aggregation of social disadvantages in the next generation. The poverty thesis predicts that since social disadvantages of a child's family are associated with fewer family's material and economic resources, they increase the likelihood of intergenerational consequences. From this point of view, parental school dropout and receipt of social assistance are intergenerationally associated with children's social disadvantages because they are related to childhood poverty. In other words, the associations of parental school dropout, unemployment and receipt of social assistance with children's subsequent social disadvantages in their own adulthood would be mediated through family income poverty (H1).

The mechanism of *socio-cultural transmission* assumes that the presence/absence of cultural resources, as well as being socialized into cultural characteristics of the childhood family may play a role in intergenerational transmission of social status. From this point of view, the intergenerational transmission of school dropout may be due to a lack of cultural resources, as well as values and attitudes which may not support studying but may support early employment (see Jackson, Erikson, Goldthorpe, & Yaish, 2007). Parental unemployment in turn may be associated with children's attitudes towards unemployment. This being a less negative atti-

tude towards the possibility of their own unemployment as adults. (Mäder, Müller, Riphahn, & Schwientek, 2014) They may be less likely to avoid the status of unemployed job seeker and may feel more often public employment services as a natural way to receive employment. This may be the case especially in young adulthood when life standards of the unemployed may not differ very much from those of the employed. The mechanisms behind intergenerational associations of the receipt of social assistance is assumed to be similar to the case of unemployment.

The socio-cultural transmission thesis predicts that parental school dropout, unemployment and receipt of social assistance are associated with second-generation disadvantages without being mediated by the family's lack of material and economic resources. In other words, the simple lack of material resources, i.e., childhood poverty, cannot explain the intergenerational transmission of disadvantages (H2). From this point of view, the accumulated social disadvantages are more strongly inherited from one generation to another because they indicate a stronger non-economic transmission of social disadvantages. In the case of our indicators, this would mean that parental school dropout, unemployment and receipt of social assistance have direct associations with children's disadvantages independent of poverty. However, even if the non-economic transmission is observed, since cultural factors cannot be measured directly by our register-based data, we may not conclude that it is completely due to socio-cultural transmission. Also, there might be unobserved confounding variables involved.

3. Accumulated disadvantages in the Finnish context

In Finland, compulsory school lasts for nine years and is normally completed at the age of 16. Secondary education is free of charge for students, offering both a vocational education and general track, the latter aimed at continuing to higher education. The proportion of young adults who have completed only compulsory school has been decreasing rapidly in Finland. Immediately after completing their compulsory schooling, 4–8% of 16-year-olds drop out of the educational system annually (Statistics of Finland, 2016a). Approximately 85 percent of young adults in Finland complete secondary school by the age of 24 (Eurostat, 2014). Within a single lifetime, dropping out of school directly after compulsory school predicts a greater likelihood of confronting various social problems in adulthood, such as poverty, unemployment and exclusion from the labor market (Brekke 2014; Bäckman & Nilsson 2011). For example, the proportion of unemployed people among young adults who have completed only compulsory education is double compared to other young adults (Kallio et al., 2016).

Finland endured a severe economic depression from 1990 to 1994. Despite subsequent economic improvement, long-term unemployment and long-term receipt of social assistance have remained at high levels ever since the depression of the 1990s. The unemployment rate among young adults (aged 20–24) has been approximately 17 percent in recent years (Statistics of Finland, 2016b). Unemployment in turn predicts a greater likelihood of receipt of social assistance, which is the last-resort, means-tested monetary benefit of the Finnish welfare state (Kallio et al., 2016). More than half of the recipients of social assistance are unemployed, and only 7% are employed (Virtanen & Kiuru, 2015). The percentage of social assistance recipients aged 18–24 as a percentage of the total population of the same age has been approximately 15 percent in recent years in Finland (THL, 2016). Furthermore, approximately 7 percent of the total population of Finland received social assistance in 2014 (THL, 2016).

Although unemployment may be stigmatizing (Georgellis & Sanfey, 2001), unemployment benefits are automatically provided when one is registered as an unemployed job seeker. However,

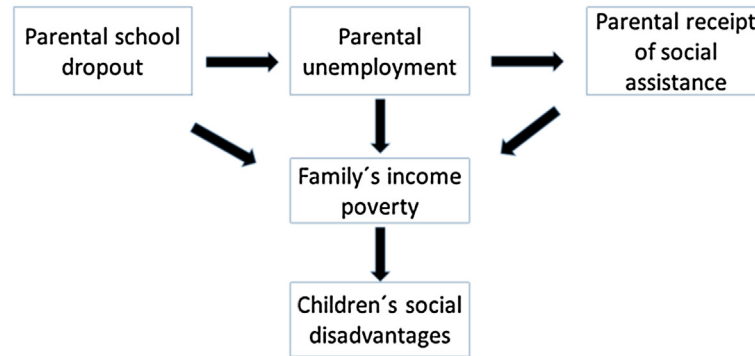
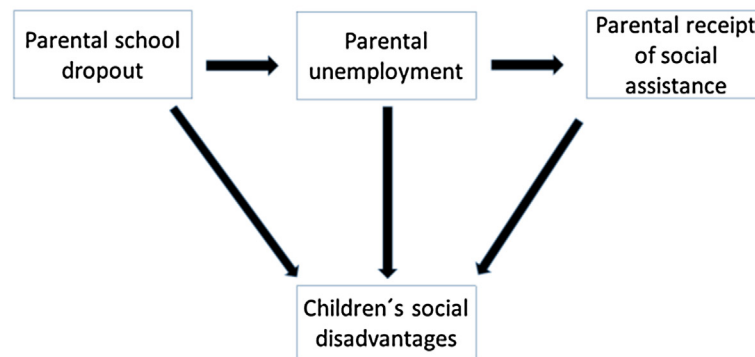
H1: The poverty thesis**H2: Socio-cultural transmission**

Fig. 1. The intergenerational associations of parental social disadvantages and children's outcomes according to the poverty thesis and socio-cultural transmission.

social assistance is not received by all who need it. It may be under-used because of its means-tested, bureaucratic and stigmatizing nature (Blomberg, Kallio, & Kroll, 2016). People with accumulated social disadvantages are over-represented among recipients of social assistance. In addition to poverty, they suffer much more often from poorer physical health and from mental health problems; they are more socially excluded; and in many ways, their quality of life is poorer (Hannikainen-Ingman, Kuivalainen, Sallila 2013). It may be argued that receiving social assistance is itself a measure of accumulated social disadvantages.

4. Data and methods

Parental disadvantages are measured when children are 15 years old, the age at which they are studying for the final year of compulsory school and are supposed to decide whether to continue their education. Parental disadvantages observed at this age are also likely to reflect earlier family disadvantages accumulated over the early life-course (See Brooks-Gunn & Duncan, 1997). Children's own disadvantages are measured when children are 22 years old – young adults in a life phase that typically includes transitions such as moving away from home, beginning a new phase of education and entering the labor market (Ilmakunnas, Kauppinen, & Kestilä, 2015; Shanahan, 2000). During this life phase, unemployment (Järvinen & Vanttaja 2005) and social assistance receipt (Hannikainen-Ingman et al., 2013) are more common than later in life. Although it may be temporary, being socially disadvantaged

as a young adult predicts a higher probability of negative consequences in later life (See Bell et al., 2011; Berg et al., 2011).

For our analyses, we applied register-based data that was combined by Statistics Finland (contract TK-52-1192-14). The data consisted of a 25% sample of persons born between 1980 and 1986 who have lived in Finland for at least one year between 1991 and 2008, and have biological siblings who were all born between 1980 and 1986. The sample persons and their siblings were clustered into families. If several persons belonged to the same family, one of them was randomly selected as the main sample person. For both the sample persons and their siblings, the parental data were taken from the year when the main sample person was 15-years-old. If the main sample person did not live with a biological or adoptive parent when he or she was 15-years-old, both the sample person and his/her siblings were removed from the data. Additionally, all persons who did not live in Finland between the ages of 15 and 22, as well as their families, were removed from the data. The data consisted of 157,135 children.

4.1. Independent variables

We measured parental disadvantage using multiple indicators: school dropout, unemployment and receipt of social assistance. Parental school dropout was measured by the highest level of parental education: if neither of the parents had completed secondary education, we considered this a case of parental school dropout. Parental unemployment and the receipt of social assistance were measured in number of months, which were summed

up and divided by the number of parents in the family. We also applied different indicators of family income poverty. In our reported models we used a standardized continuous indicator for family income, which adjusts for the number of children in the family (family income divided by the square root of the number of children). Because we are interested in family income poverty and not family income as such, in our unreported analysis we also used the indicator of relative income poverty (less than 60 percent of the median income of all parents). The dummy-coded indicator was devised using information on the total income of parents, which was summed up and divided by the number of parents in the family as well as family income deciles. This information was collected from the sample of persons at the age of 15.

The measure of parental disadvantage covers all possible logical combinations of the individual disadvantage variables and is categorized as follows: there is/are 1) no parental disadvantage(s); 2) parental unemployment (at least one month within one year); 3) a parent who dropped out of school (neither of the parents have completed secondary education); 4) parental receipt of social assistance (at least one month within one year); 5) parental unemployment and school dropout; 6) parental unemployment and receipt of social assistance; 7) parental school dropout and receipt of social assistance; and 8) parental unemployment, school dropout and receipt of social assistance. This categorization also allows us to consider the question of accumulation of disadvantages.

Compared to two-parent families, in single parent families social disadvantages are more often intergenerationally associated (See for example Martin 2012; Bird 2007). Also, negative correlations have been found between the number of children in the household and their educational outcomes (Ginther & Pollak 2004) and among immigrants' intergenerational associations of social disadvantages, which are stronger than among the main population (see, e.g., Foley, 2004; and Bluedorn and Cascio, 2005). Therefore, we controlled the family structure at the age of 15 by using a dummy indicator for single parenthood and a categorized variable for the number of children in the families (one, two or at least three children; families with one child were used as a reference group). We also controlled gender and country of birth (native Finnish, western or non-western immigrants). These control variables are commonly used as potential confounders that are often associated with an individual's parental and own social disadvantage (Kallio et al., 2016).

4.2. Dependent variables

The dependent variables were the same three individual measures of disadvantages that were used for parents. Children's school dropout, unemployment and receipt of social assistance were recorded at the age of 22. As this age is lower than the median age for university students to join the labor force in Finland, 25 (Statistics of Finland, 2009), mainly those ending their studies after primary or secondary education are at risk of unemployment and social assistance receipt. In our first set of models, each of these was analyzed separately. After that we studied the accumulation of these disadvantages among the children by evaluating the number of disadvantages they had at that age as dichotomous outcome variables (2–3 disadvantages and 0–1 disadvantages as a reference group).

4.3. Methods

For the data that were clustered according to families, we applied random-effect linear models. In the case of dichotomous outcomes, such as our individual disadvantage variables, the linear model is referred to as a *linear probability model* (Wooldridge, 2002; Mood, 2009). Although it is not possible to measure all aspects of

family origin, the usage of sibling data, and thereby sibling models, partially allows us to overcome the problem caused by the omitted family variables as rho captures all family effects shared by the siblings, as well as those not observed directly (Page & Solon 2003). The sibling correlation can be considered to be a measurement of the total effect of family background because it also captures factors that are unrelated to the fixed effects and are used as the observed measures of family background. From the variance components of the models, we computed *rho*, the sibling correlation (essentially the same as intra-class correlation). If computed from an "empty" model without any controls, *rho* can be considered to be an estimate for the degree of similarity between siblings: the stronger the effect of shared family factors, the more siblings would be alike in terms of social disadvantage. *Rho* captures all shared family factors, including both genetic and environmental effects (see Sieben & De Graaf, 2001; Sieben & Graaf, 2003; Conley, 2008).

Our modeling strategy was as follows. First, we estimated an empty model for each outcome (unemployment, school dropout, receipt and the accumulated disadvantages) that provided us baseline variance components and baseline *rhos*, and then models that only included the control variables. The variance components and *rhos* are reported in Table 2. Next we estimated the univariate association of parental disadvantages and children's outcomes (Table 3). Then, we provided a similar set of models, controlling for parents' unemployment, school dropout, receipt of social assistance and combinations of different disadvantages, which are also separate for each outcome. Finally, we also provided models in which we controlled for a family income. The estimates for family disadvantages, along with the equivalent variance components and *rhos*, are reported in Table 4 (for single outcomes) and 5 (for the accumulation of disadvantages). With the exception of the empty models and univariate associations, every model was controlled for gender, possible immigrant background, and family structure. The estimates for these are omitted from the tables, but available from the authors upon request.

5. Results

Table 1 shows the proportion of children who experienced different social disadvantages based on our family background variables (the indicators for a disadvantaged family background and relative income poverty). Differences are evident between children from advantaged and disadvantaged families. Nearly half (46%) of those who grew up in families with accumulated disadvantages (three disadvantages) had dropped out after compulsory school, 40% were unemployed, and 45% received social assistance. On the other hand, 12% of those who grew up in advantaged families had dropped out after compulsory school, 14% were unemployed, and 10% received social assistance. Additionally, what we can see from the table is that accumulation of social disadvantages is not very common. Considering our control variables, as expected, single parenthood increased the risk of children's social disadvantages remarkably. The number of children did not have a strong effect on children's outcomes, but compared to families with one or three children, children from two-child families were less likely to experience social disadvantages in their own adulthood.

5.1. Single indicators as outcomes

Now we shift the focus to the results from random-effect linear probability models. Let us first consider *rhos* from empty models (see Table 2). They suggest that family background plays the weakest role in explaining unemployment (0.148), and a stronger role in dropping out of schooling (0.233), and receipt of social assistance (0.230). In all cases, the control variables only have a modest impact

Table 1
Descriptive statistics by family characteristics (%).

Family disadvantage indicator	N	Children's outcome disadvantages			
		School dropout	Unemployment	Receipt of social assistance	
No disadvantages	62	97698	12	14	10
Unemployment	18	28238	16	23	17
School dropout	7	11021	25	22	17
Receipt of social assistance	2	3465	29	29	31
Unemployment and school dropout	3	4325	27	30	23
Unemployment and receipt	5	7644	32	34	37
School dropout and receipt	1	1505	43	33	39
Unemployment and school dropout and receipt	2	3239	46	40	45
All	100	157135	17	19	15
Family income means	Whole population	No outcome disadvantages	44382	40433	37528
	48919	53139			

Table 2
The variance components and sibling correlations for empty models and for models with control variables included.

	School dropout		Unemployment	
	Empty	Controlled	Empty	Controlled
Family variance	0.032 (0.001)	0.029 (0.001)	0.023 (0.001)	0.021 (0.001)
Residual variance	0.107 (0.001)	0.106 (0.001)	0.300 (0.001)	0.130 (0.001)
Rho	0.233 (0.004)	0.213 (0.004)	0.148 (0.004)	0.138 (0.004)
N	157135	157135	157135	157135
	Receipt of social assistance		Accumulated disadvantages	
	Empty	Controlled	Empty	Controlled
Family variance	0.029 (0.001)	0.026 (0.001)	0.026 (0.000)	0.023 (0.000)
Residual variance	0.097 (0.001)	0.098 (0.001)	0.079 (0.000)	0.080 (0.000)
Rho	0.230 (0.004)	0.207 (0.004)	0.249 (0.004)	0.224 (0.004)
N	157135	157135	157135	157135

Control variables: gender, country of birth, family structure and number of children in the family. Standard errors in parentheses.

Table 3
The univariate association of parental disadvantages and children's outcomes.

	School dropout	Unemployment	Receipt of social assistance
School dropout	0.114*** (0.003)	0.097*** (0.003)	0.105*** (0.003)
Unemployment	0.055*** (0.003)	0.110*** (0.002)	0.110*** (0.002)
Receipt of social assistance	0.169*** (0.004)	0.173*** (0.003)	0.251*** (0.003)
Family income	0.064*** (0.001)	0.063*** (0.001)	0.067*** (0.001)

Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

on both the variances and the *rhos*, ranging from 0.01 to 0.03 in the case of the latter.

Next, we focus our attention on the univariate associations between parental disadvantages and children's outcomes. From Table 3 we see that, without any controls, parental school dropout was equally associated with children's school dropout, unemployment and receipt of social assistance. On the other hand, compared to parental school dropout, parental unemployment was clearly less associated with children's school dropout but was strongly associated with children's unemployment and receipt of social assistance. The parental receipt of social assistance was clearly most strongly associated with children's school dropout, unemployment and especially children's receipt of social assistance. The level of family income was least associated with children's social disadvantages.

Controlled models for children's individual outcomes are reported in Table 4. Model 1 suggests that children whose parents had been unemployed (without other disadvantages) had only four percentage points' higher risk of school dropout than children from advantaged families. Parental school dropout had a stronger association with children's school dropout than did parental unemployment. The risk increased if the parents had received social assistance. Accumulated family disadvantage had stronger associations with children's school dropout than did individual parental disadvantages. If the parents had both been unemployed and dropped out after compulsory school, children's risk of school dropout did not differ from those experiencing only a single parental disadvantage. However, parental school dropout and unemployment were more common parental disadvantages

Table 4
The coefficients of parental disadvantages associations with the children's outcomes.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	School dropout	School dropout	Unemployment	Unemployment	Receipt of social assistance	Receipt of social assistance
Family disadvantage indicator (ref. No disadvantages)						
Unemployment	0.042*** (0.003)	0.027*** (0.003)	0.086*** (0.003)	0.062*** (0.003)	0.066*** (0.002)	0.048*** (0.003)
School dropout	0.106*** (0.004)	0.092*** (0.004)	0.062*** (0.004)	0.040*** (0.004)	0.049*** (0.004)	0.032*** (0.004)
Receipt of social assistance	0.135*** (0.007)	0.117*** (0.007)	0.125*** (0.007)	0.0967*** (0.007)	0.176*** (0.006)	0.155*** (0.007)
Unemployment and school dropout	0.133*** (0.006)	0.109*** (0.006)	0.144*** (0.006)	0.107*** (0.006)	0.113*** (0.006)	0.0861*** (0.006)
Unemployment and receipt	0.171*** (0.005)	0.146*** (0.005)	0.191*** (0.005)	0.152*** (0.005)	0.243*** (0.004)	0.215*** (0.005)
School dropout and receipt	0.263*** (0.010)	0.242*** (0.010)	0.159*** (0.011)	0.127*** (0.011)	0.239*** (0.010)	0.216*** (0.010)
Unemployment and dropout and receipt of social assistance	0.288*** (0.007)	0.263*** (0.007)	0.234*** (0.007)	0.195*** (0.007)	0.303*** (0.007)	0.274*** (0.007)
Family income controlled*		*		*		*
Family variance	0.025 (0.001)	0.025 (0.001)	0.017 (0.001)	0.016 (0.001)	0.021 (0.000)	0.020 (0.000)
Residual variance	0.106 (0.001)	0.105 (0.001)	0.130 (0.001)	0.130 (0.001)	0.0975 (0.001)	0.0973 (0.001)
Rho	0.191 (0.004)	0.189 (0.004)	0.117 (0.004)	0.111 (0.004)	0.175 (0.004)	0.173 (0.004)
N	157135	157135	157135	157135	157135	157135

Control variables: gender and country of birth, family structure and number of children in the family. Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

(see Table 1) and therefore important predictors of children's disadvantages.

On the other hand, children whose parents had been unemployed and received social assistance had a greater risk of school dropout (17 percentage points) than children from advantaged families. Children whose parents had dropped out after compulsory school and received social assistance had 26 percentage points higher risk of school dropout than those from advantaged families. Children whose parents had accumulated social disadvantages (all three disadvantages) had 29 percentage points higher risk of school dropout than children from advantaged families.

Model 3 suggests that children whose parents were unemployed but did not have other disadvantages had 9 percentage points higher risk of unemployment than children without parental disadvantages. Parental school dropout was slightly less associated with the increased risk of unemployment. The combination of those two family disadvantages was associated with a somewhat increased risk compared to individual disadvantages, similar to the risk among those with (only) parental receipt of social assistance. If parents had been both unemployed and received social assistance, the risk was 19 percentage points higher than for children from advantaged families. Children from families with accumulated disadvantages had a greater risk of unemployment (23 percentage points) than children from advantaged families.

Model 5 shows that children from families receiving social assistance and from families with accumulated social disadvantages were more likely to become recipients of social assistance. Parental unemployment and school dropout were less strongly associated with children's risk of receiving social assistance. It is notable that dropping out of school was more strongly associated with children's dropout than with children's receipt of social assistance. Children whose parents received social assistance had a risk of becoming recipients of social assistance that was 18 percentage points higher than children from advantaged families. A child whose parents had been unemployed or dropped out after compulsory school and were recipients of social assistance had 24 percentage points greater risk of becoming recipients of social

assistance. Children from families with accumulated social disadvantages had 30 percentage points greater risk of becoming recipients of social assistance than children from advantaged families. According models 2, 4 and 6, controlling family income had very little effect on associations between parental disadvantages and children's outcomes

5.2. Accumulated disadvantages as outcomes

Next, we concentrate more on children's accumulated outcome disadvantages (Table 5). In models 7 and 8 we compared those children without any measured social disadvantages and those who had only one social disadvantage to those who had 2–3 social disadvantages. Model 7 shows that children whose parents were unemployed and children whose parents had dropped out after compulsory school had equally increased risks of accumulation of social disadvantages. Parental receipt of social assistance was more strongly associated with children's accumulation of disadvantages than parental unemployment and school dropout together. The combinations of parental disadvantages, including receipt of social assistance, were associated with children's risk of accumulating social disadvantages, reaching new levels of associations. Compared to children whose parents were unemployed and received social assistance, children whose parents had received social assistance and dropped out after compulsory school had a slightly higher risk of accumulating disadvantages. The children with the greatest risk of accumulation of social disadvantages had parents who were unemployed, dropped out after compulsory school and received social assistance. According to model 8, family income continued to demonstrate very little association with children's outcomes. Indeed, neither of the indicators of parental income or income poverty (see page 9) had an effect on the association of measured parental disadvantages nor on children's outcome disadvantages (estimates available on request). Also, controlling family structure reduced slightly more the intergenerational associations of accumulated social disadvantages than intergenerational associations of single indicators

Table 5

The coefficients of parental disadvantages association with children's cumulated outcomes (models predict 2–3 disadvantages compared to 0–1 disadvantages).

	Model 7	Model 8
	Accumulated disadvantages	Accumulated disadvantages
Family disadvantage indicator (ref. No disadvantages)		
Unemployment	0.058*** (0.002)	0.043*** (0.002)
School dropout	0.059*** (0.003)	0.045*** (0.003)
Receipt of social assistance	0.147*** (0.006)	0.129*** (0.006)
Unemployment and school dropout	0.122*** (0.005)	0.098*** (0.005)
Unemployment and receipt of social assistance	0.214*** (0.004)	0.190*** (0.004)
School dropout and receipt of social assistance	0.240*** (0.009)	0.220*** (0.009)
Unemployment and dropout and receipt of social assistance	0.307*** (0.006)	0.283*** (0.006)
Family income controlled*		*
Family variance	0.019 (0.000)	0.019 (0.000)
Residual variance	0.080 (0.000)	0.080 (0.000)
Rho	0.191 (0.004)	0.189 (0.004)
N	157135	157135

Control variables: gender and country of birth, family structure and number of children in the family. Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

5.3. The observed and unobserved family background effects

When controlling for any observed parental characteristics, ρ did not decrease much between the empty models and models 1–6 and 7–8. This indicates that each of our family background variables had an independent primary effect. The observed family background variables explained the largest proportion of the family background variance in the case of social assistance receipt, and ρ decreased by 0.055–0.175. This suggests that the observed family characteristics and control variables explained sibling similarity in receipt of social assistance (one-fourth of ρ) better than they explained school dropout and unemployment (one-fifth of ρ).

The ρ was 0.249 in the empty model of children's accumulated disadvantages (see Table 2), which was than in the case of individual parental disadvantages. The same applied to the models with only control variables, with a ρ of 0.224 for the accumulated disadvantages. When all of the family variables were controlled, ρ of children's accumulated social disadvantage decreased to 0.19. This indicates that, together, the observed family characteristics and control variables explained the similarity of siblings in the accumulation of disadvantages roughly as well as they explained the similarity in receipt of social assistance, explaining approximately one-fourth of ρ . Therefore, we conclude that parental accumulation of social disadvantages was associated with increased accumulation of social disadvantages in the next generation.

6. Conclusions

Our results indicate that social disadvantages are intergenerationally inherited in Finland. Based on sibling correlations, family background was most strongly associated with children's school dropout and receipt of social assistance. In general, sibling correlations are somewhat smaller than those reported by Erola and Jalovaara (2017) for ISEI and Erola (2012) for education measured as years and order categories, ordered EGP classes and ISEI, in all cases computed for older birth cohorts of siblings. The difference may be due to cohort differences, the young age of those included in our current data, or because social disadvantages are inherited weaker than these types of socioeconomic attainments.

Nonetheless, results concerning the intergenerational transmission of income ranking

in Finland indicate that the inheritance is clearly stronger at the ends of the income distribution (Sirniö, 2016). This suggests that intergenerational associations appear stronger when focus is only on those in the most disadvantaged group compared to the whole population. To compare intergenerational transmission of social disadvantages to intergenerational transmission of social status in general competently, the comparison should be done using the same data.

Of the observed family characteristics, parental receipt of social assistance was the most strongly associated with children's social disadvantages. The intergenerational associations of school dropout, unemployment and receipt of social assistance were not explained by income poverty. Therefore, parental unemployment, poverty of childhood family and general economic conditions of the family are not among the key explanations of the intergenerational transmission of social disadvantages, whereas parental school dropout, and especially the receipt of social assistance, are.

Despite the correlations between different social disadvantages, our results show that different social disadvantages of family background also have different associations with the social disadvantages that children face in their own adulthoods. Parental school dropout predicts the children's school dropout better than it predicts their unemployment or receipt of social assistance. This may be because of the lack of role models in terms of education and because of parents' inability to support their children's education, or because children learn from their parents' habits, including values, attitudes and future goals, which may exclude good study habits; however, this does not necessarily lead to unemployment or receipt of social assistance. Additionally, parental unemployment predicts children's unemployment better than other social disadvantages. Unemployment is caused by many factors, and compared to parental school dropout, this social disadvantage is usually more short-term. Therefore, more learning, for example, may be involved in the case of parental school dropout than parental unemployment. As a result, to varying degrees, children may acquire something from their parents that increases the risk of similar disadvantages in their own adulthoods.

As the unemployed, families receiving social assistance form a heterogeneous group. We may generally say that some parents must apply for social assistance despite of the stigma connected to it because their income is simply not enough to cover their expenses, although our findings are contrary. Their use of social assistance may often be temporary, but it may also be long-term, for instance, due to long-term health problems. In these cases, the families' receipt of social assistance hardly predicts social disadvantages in the next generation. At the same time, other families receiving social assistance suffer from accumulated social disadvantages, and more often they may be long-term recipients of social assistance. Their disadvantaged positions are more likely to be passed down from one generation to another. This distinction between families receiving social assistance likely explains our results, indicating that parental receipt of social assistance had the strongest intergenerational effect when it was combined with parental school dropout, which is a long-term social disadvantage. Therefore, in this case, which applies to a relatively small number of people, receipt of social assistance is more of an indicator of social problems.

The finding that parental receipt of social assistance predicts children's socially disadvantaged positions more strongly than any other parental social disadvantage indicates that the aggregated social disadvantages are strongly inherited. Having more disadvantages in their family background was always worse for the children, regardless of the disadvantaged outcome in question. In poor families, the poverty is not as clearly passed down from one generation to another. However, social disadvantage is passed down in families with parents who are unemployed, have dropped out of education right after compulsory school and receive social assistance. Because the population with this type of accumulated disadvantage is such a small group in Finland, the welfare state can be perceived as quite successful in preventing accumulated social disadvantage. On the other hand, because neither the total family background effect nor the effects of accumulated family disadvantages were explained by the family's relative income poverty or general family income, our findings suggest that a lack of material resources alone does not form a remarkable risk for the future well-being of the family's children.

Our findings support socio-cultural transmission (H2) more than the poverty thesis (H1) because intergenerational associations of school dropout, unemployment and receipt of social assistance were not mediated by income or by income poverty but had direct effects on children's outcomes in young adults. Therefore, our results suggest that it is non-economic factors, in general, that matter. Social and cultural resources, learning and habituation may play important roles in the intergenerational transmission of social status. In other words, children are likely to learn persistent habits from their parents, including ways of thinking and behaving, values, and attitudes; and those habits lead to intergenerational transmission of social status. Although our concept of culture is purposely wide, the culture of poverty explanation becomes more relevant the more we focus on how accumulated family disadvantages increase the accumulation of social disadvantages in the next generation. As the poverty culture theory predicts (Dean & Taylor-Gooby, 2014), becoming accustomed to the stigma of receiving social assistance, as well as the absence of positive role models in terms of work and education, are likely to be significant factors behind the intergenerational transmission of social disadvantages. At the same time, the lack of cultural and useful social resources may prevent parents of disadvantaged families from supporting their children. Children from families that lack economic resources must struggle more to achieve advantaged positions. However, at least in the case of children in our study, the Finnish welfare state seemed to compensate effectively for material disadvantages. Although support from the welfare state does not allow children to be sent to, for example, language courses abroad, it remarkably increases equality between

those from advantaged and disadvantaged backgrounds by providing comprehensive social security and a free education system. It does not compensate for the socio-cultural and other factors (e.g., poor mental health or substance abuse, which may also be related to intergenerational processes) that lead to intergenerational transmission of social status.

Traditional approaches to inequality have emphasized the importance of material resources, especially control over material resources, starting from Marx's concept of exploitation (Lamont, Stefan, & Matthew, 2014). At the same time, "culture" has generally been dismissed as an explanation that is too vague and normatively dangerous. However, as mentioned, considering the intergenerational transmission of social disadvantages, culture may be reasonably understood in a residual way, where culture refers to everything that is not material. Theories of relative risk aversion (Breen & Goldthorpe, 1997; Werfhorst & Andersen, 2005) that measure the effects of non-material resources, information differentials, poverty culture, and so on, may be used to specify the cultural mechanisms that influence the research findings, avoiding the all-inclusiveness of a cultural explanation. Studies on inequality that concentrate on material resources and neglect the culture that may mediate associations between structures and outcomes are likely to miss important mechanisms between these factors. Behavior differentials among disadvantaged people can be something more than just reactions to structural and economical inequalities because individuals may not always strive for the goals that are considered to be valuable in society.

The cultural explanation is considered normatively dangerous because it may be seen as placing blame on the victim, even if the cultural transmission itself is at least partially an outcome of structural inequalities. Similarly, as in Merton (1968), social retreat and abandonment of goals that are considered to be valuable in society are the first outcomes when lacking the means to achieve those goals. These outcomes may result from adapting to difficult circumstances rather than adopting social norms (Wilson, 1996). For example, in neighborhoods with accumulated social disadvantages, mainstream norms may not help individuals cope in their social surroundings (Elliot et al., 1996). However, although the structural approaches to inequality have dismissed cultural explanations as normatively dangerous, we should not shy away from acknowledging this dimension of inequality, social policy and welfare. Structural studies on inequality often do well without cultural concepts. However, when dealing with people's lives, their well-being and happiness, culture should not be dismissed by social policy. Culture seems to carry both positive and negative habits from one generation to the next, and we should not avoid observing these outcomes. Otherwise, efforts to prevent intergenerational transfer of social disadvantages could be wasted.

At the same time, we should be cautious of reaching too far to achieve generalizations that are based only on our results. For instance, our measurement of economic resources of the childhood family may be too coarse to capture their actual effects, and if available, applying permanent income information would provide different results. Yet, family poverty and income had remarkably small additional effects on our outcomes. Further, some of the key indicators, such as parental health, could provide important additional insights on the topic. However, it does not seem plausible that this added information could significantly change our main conclusions.

Our findings indicate that accumulated parental social disadvantages predict later disadvantage among the children, and in the context of Finnish egalitarian welfare state, the negative effects may not be related to a lack of material resources. In Finland, the welfare state has already eliminated extreme absolute poverty to a large extent, whereas the cultural and other non-material factors may still have importance. Securing the minimum life standards by

social assistance is only one means of supporting the well-being of socially disadvantaged families. For families with accumulated disadvantages, the assistance may be a necessary condition for other types of interventions. In addition, cultural causes must be taken into account. Concrete means should exist to support the inspiration, attitudes and habits that children need to reach their goals in life. In socially disadvantaged families, social assistance should be accompanied by preventive social work and preventive forms of child protection. Furthermore, social assistance is a basic service that generally concerns child protection. However, to be successful in this, good alternatives should be available for socially disadvantaged families to receive top-down interventions, along with more attractive, inspiring and accessible educational activities.

What is left in the black box of culture is unfortunately beyond the scope of our research. Environmental, genetic and cognitive factors that are difficult to distinguish from each other may also be a factor. We require more family background variables, especially variables to measure neighborhood effects and the influence of siblings on each other. In addition, indicators that are not typically available in register data should be included in the future studies, such as mental and physical health, subjective well-being and substance abuse

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