The intergenerational correlation of social assistance and selection bias in the Finnish population data

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Using the social assistance register we were able to study intergenerational correlations of social assistance recipiency in Finland and how the length of the observation window for identifying recipiency affects on the correlation coefficients. Parents' social assistance was observed in 1990, and that of their children aged 18–32 was observed in 2005. The intergenerational correlation was .15 on average when the observation window was a calendar year for both parents and children. The correlation varied substantially according to the length of the observation window, the gender and the age of child. The intergenerational correlation was stronger in the early twenties (.20), and substantially lower (.10) in the early thirties. The correlation was stronger for boys (.19) than for girls (.12). As expected from the theory and previous studies, a shorter observation window for parents yielded higher estimates for the intergenerational correlation, and a shorter observation window for children yielded lower estimates. There are two sources of bias when using a shorter observation window. The downward identification bias results when households receiving social assistance for a short spell outside the observation window are classified as non-recipients. The upward selection bias results when households receiving long-term social assistance are over-represented as compared to parents who receive social assistance only for a short spell. These two sources of bias operate in a complex way and the direction of bias they cause for the intergenerational correlation is essentially an empirical question. Hence, when drawing (policy) conclusions from studies on intergenerational correlations, one should keep in mind that the correlation estimates are very sensitive to the length for the observation windows and to the life stage when the children's social assistance recipiency is observed.

Keywords: Finland, intergenerational correlation, social assistance, welfare participation.

Introduction

The generational transmission of social assistance or welfare participation has sparked debate ever since Charles Murray's controversial work *Losing ground* (1984). His main argument was that the welfare programs in the United States produce perverse incentives to remain unemployed and to receive welfare. In the very same tone Lawrence Mead argued in another influential book *New politics of poverty* (1992) that families on welfare became trapped in poverty because living on social assistance changes the values and behavior of parents and their children. Parental use of welfare is claimed to lower the stigma of welfare use for their children and to teach them how to misuse the system (Moffitt, 1992). Hence, both Murray and Mead argued that the welfare state actually causes the vicious cycle of poverty by creating welfare dependency, and they backed up their argument with studies showing that growing up in a welfare family increased the risk for a child to participate in a welfare program.

Both Murray and Mead draw a causal link from the parents' social assistance to their children's social assistance. However, a family is eligible for social assistance only if its incomes are low enough and the family has no other sources to make ends meet. So the intergenerational correlation of social assistance may well be nothing more than evidence of an intergenerational correlation of (low) income (see Gottschalk, 1996). Definite answer to this question may never be found, since identifying and controlling all possible factors behind the intergenerational transmission of socioeconomic position is perhaps unfeasible. Children's income correlates with their parents' income in every known society. This is because better off families can pass on more wealth, human and social capital, as well as values and aspiration, to their children, and the children therefore directly inherit better socioeconomic positions or at least have better chances when competing for them (see Piketty, 2000). Also a part of the intergenerational income correlation is due to genetic similarities between parents and children, while debate continues on just how big a part that may play (Jencks & Tach, 2006).

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Despite the debate over welfare dependency, only a fairly small number of empirical studies have been done on the topic, and the most of them in the United States. This owes more perhaps to the lack of available data than to a lack of interest. Page (2004, 232) has drawn a summary of studies made in the United States. Depending on what observation period is used (both for parents and children) for measuring possible welfare program participation, the intergenerational correlation is roughly between .20 - .30. Most of the studies in the United States are limited to the mother–daughter correlation, since many US welfare programs are limited to single-parent households. Borjas & Sueyoshi (1997) is one of the exceptions where both men and women are studied. However, studies from other countries number only a few (see d'Addio, 2007).

According to Lorentzen and Nielsen (2008, 34), the intergenerational correlation of social assistance in Norway was .15[1] among those aged 20–27 in 2004, with the observations on parental social assistance participation taken from 1994. In Sweden, Stenberg (2000) estimated that the intergenerational correlation was .10 - .12[1] in Stockholm among those aged 29–30 in 1982–1983. In this study, parents' social assistance was observed by using varying observation windows (6 to 20 years) between 1953 and 1972. Maloney et al. (2003) came to the conclusion that the intergenerational correlation was .37 among New Zealanders aged 18–21, whose parents' participation was observed up to the child's 14th birthday. Also Beaulieu et al. (2005) studied the intergenerational correlation among those aged 18–21 in Canada. According to their results, the correlation was .15 - .16, when the children's observation window was a calendar year between 1990 and 1994 and the parents' observation window was a three-year period from 1982–1985.

In this paper we study the intergenerational correlations of social assistance among Finns aged 18–32 using population-level administrative records. There are no previous studies on the intergenerational correlation of social assistance in Finland. Our aim is to provide as detailed a picture as possible of the intergenerational correlations, and how they change when different observation windows are used for identifying social assistance recipiency and when recipiency is observed at different ages. Previous studies indicate (Page, 2004) that the length of the observation window and the age at which the child's possible later social assistance recipiency is observed has a substantial influence on the intergenerational correlation of social assistance. Our expectation is that this is also the case in Finland. Our population-level administrative data enables us to study correlations in single birth cohorts.

Social assistance in Finland

In general, social assistance programs are a last-resort form of means-tested economic assistance that is available to nearly all citizens as a guaranteed minimum level of subsistence. Social assistance often includes a basic or standard cash benefit adjusted for household size, with supplements to cover the special needs of the household and case-specific payments for occasional needs. Most of the developed coun-

tries have social assistance programs operating under different names (Eardley et al., 1996; Nelson, 2007). For example, Income Support in the United Kingdom, Sozialhilfe in Germany and the Temporary Assistance for Needy Families (TANF) in the United States.

In Finland the payment of the social assistance benefit (living allowance, toimeentulotuki) is regulated by national legislation and is handled locally in the municipalities by social workers under the supervision of the town council. Social assistance in Finland is comprehensive: it is not targeted to special groups, such as single parents. Social assistance is a last-resort financial assistance to a household when ordinary sources of income or other cash benefits (such as unemployment benefits and housing allowance) are not sufficient to ensure the person or family meet the least minimum living standard needed for a life of human dignity. It consists of a basic cash benefit and a supplementary benefit. The basic benefit includes living and housing expenses. The amount of basic benefit is regulated by national legislation and is calculated based on the daily living expenses of different population groups, corresponding to a minimum level of consumption. The extent of compensation for housing costs is decided by the local municipality and social workers. The supplementary benefit is intended to cover special expenses, arising from the household's special needs or circumstances (Social Welfare in Finland, 2006).

The rate of social assistance recipiency rose drastically in Finland during the recession of the early 1990s (Figure 1). It peaked between 1996 and 1997, when 14 % of the population and 12 % of children lived in a household receiving social assistance for at least one month during the calendar year. After the mid-1990s the number of social assistance recipients has decreased every year. In the 2005, the proportion of population receiving social assistance was 9 %, while 7 % of the child population received social assistance (Social Assistance, 2006). The probability of receiving social assistance according to age shows the risk is highest in the early twenties. Eighteen % of 21-year-old Finns received social assistance during 2005. The proportion decreases with increasing age, being 8 % among 30-year-olds (see Table 2, column P).

Data

The National Institute for Health and Welfare collects administrative data on every beneficiary of social assistance in Finland. Since the end of the 1980s, the Register of Social Assistance contains basic information on all families who received social assistance during the calendar year. Comparable time series are available from the beginning of the 1990s. The register also contains the social security number of the head of household (the person who filed the assistance request) and her spouse's. The register contains additional cross-sectional information for the November situation. Each year, official statistics on social assistance clients

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[1] Calculated from the conditional probabilities presented in the study.

Figure 1. Number of people and children in social assistance households as a proportion of the population.
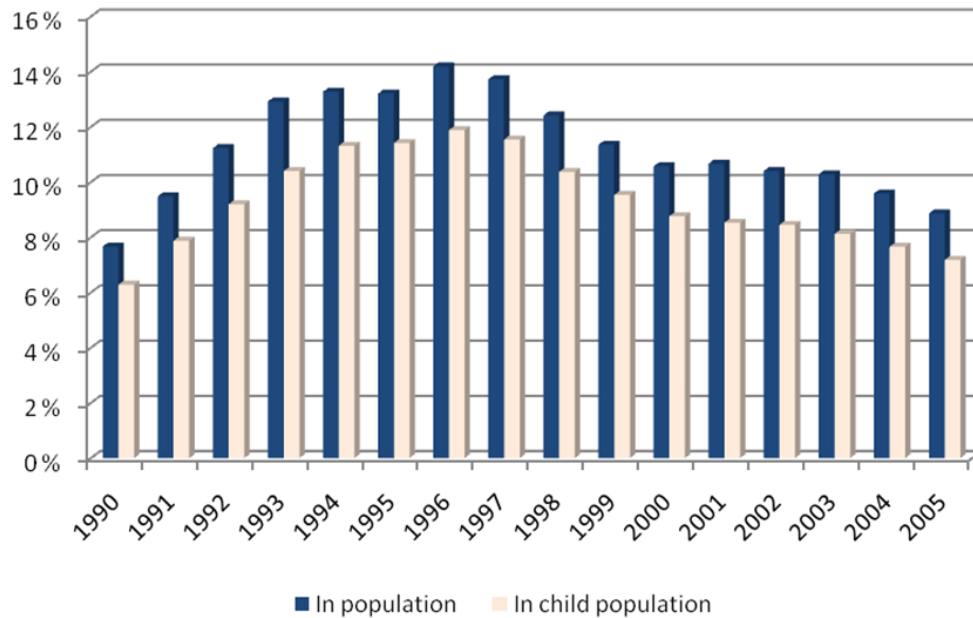
are compiled based on the register data (Social Assistance, 2006).

As the basis for the data set, all households with under-age (less than 18 years old) children having received social assistance in 1990 were selected from the Register of Social Assistance. This yielded 48 011 households and social security numbers for the heads of households. Next, information from the population register was used (from Statistics Finland) to identify children in these households. The population register data include individual social security numbers and the family identification numbers (referring to the end-of-the-year situation). Identification of children succeeded for 91.3 per cent of the heads of households, and 84 212 underage children lived in these families.[2] The social security numbers of those children were in turn linked back to the Register of Social Assistance, enabling us to see how many of these children received social assistance as young adults in 2005. In the final data set all social security numbers were anonymized.

Using this data set, we were able to see how many of the children aged 3–17 living in a social assistance family in 1990 received social assistance during 2005 as an adult aged 18–32. The person is included in the register only if she or her spouse is the primary applicant. Hence, those aged 18–32 in 2005 who live with their parents who receive social assistance are not in the data. Adult children living with their parents are treated as a separate family in social assistance and they can apply for social assistance separately. However, living and housing expenses are determined according to the household they live in.

This kind of dataset that enables us to study the beneficiaries of social assistance over two generations is the first of its kind in Finland. To our knowledge, similar population-based register data are available for research purposes only in other Nordic countries.

The Register of Social Assistance includes very few variables besides basic demographic information. So a sophisticated causal analysis is not possible. Another defect is that the data include only those children who grew up in a family receiving social assistance or received social assistance themselves in 2005. However, as we have complete records for social assistance, the intergenerational correlations can be calculated by adding census information to the data, as we will see later. Another flaw in the data is that we do not have information on what has happened to those children who do not turn up in RSA records in 2005. Taking into account the young age of these people, it is unlikely that mortality is a substantial source of bias. Living abroad is undoubtedly a much more common reason for not being in the administrative records during this age period. But for this source of error we can at least argue that people living abroad are not recipients of social assistance.

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[2] Altogether 4185 children were not identified. The main reason for unsuccessful identification of children is that the heads of households have left the family receiving social assistance before the end of the year, when the family information of the population register was collected. Another main source of mismatch is incomplete recording of social security numbers in the Register of Social Assistance. Those children who were not identified show up in our analyses as not receiving social assistance as a child, which can be expected to weaken somewhat the observed intergenerational correlation of social assistance recipiency, if we assume the intergenerational correlation to be positive.

Table 1
Mobility / transition table of social assistance

		Child in SA		
		No	Yes	All
	No	N_{00}	N_{10}	$N_{.0}$
Parent(s) in SA	Yes	N_{01}	N_{11}	$N_{.1}$
	All	$N_{0.}$	$N_{1.}$	$N_{..}$

Estimating intergenerational correlations

Following the work of Page (2004), we estimated intergenerational proxy correlation coefficients for each birth cohort using the conditional probabilities of being a social assistance recipient, given that parents received social assistance (or not). The intergenerational proxy correlation can be estimated as $P_1 - P_0$, where P_1 is the conditional probability that the child receives social assistance in 2005 given that her parent(s) were a beneficiary in 1990, and P_0 is the conditional probability that the child receives social assistance in 2005 given that her parent(s) were not a beneficiary in 1990. Formally P_1 and P_0 can be presented as

$$P_1 = \frac{N_{11}}{N_{01} + N_{11}} \qquad (1)$$

$$P_0 = \frac{N_{10}}{N_{00} + N_{10}} \qquad (2)$$

where N_{00} represents the number of cases (in Table 1) who neither grew up in a family receiving social assistance in 1990 nor were social assistance claimants themselves in 2005. In the same manner, N_{01} represents the number of cases who did grow up in a family receiving social assistance in 1990 but who did not receive social assistance in 2005, N_{10} represents the number who are social assistance claimants themselves in 2005 but whose parents were not in 1990, and N_{11} represents the number of cases who are social assistance claimants themselves in 2005 and who grew up in a family receiving social assistance in 1990.

Since the data contain records only for those who lived in a social assistance family as a child in 1990 or were beneficiaries themselves in 2005, we need to calculate N_{00} and N_{10} using information on the sizes of age cohorts and the number of social assistance claimants in the age groups. The register of social assistance contains information for every person who has received social assistance in 2005, so we get N_1 and by subtracting it from $N_{..}$ (the size of age group), we get $N_{0.}$. Hence, $N_{0.}$ represents the number of cases in the age group who did not receive social assistance in 2005 and $N_{1.}$ represents cases in the age group who received social assistance in 2005. Now we can estimate that $N_{00} = N_{0.} - N_{01}$ and $N_{10} = N_{1.} - N_{11}$ and place them in the (2) and estimate P_0. We can also estimate P_1 and P_0 separately for boys and girls because we have records separately for boys and girls for solving (3), (4) and (5).

$$N_{0.} = N_{..} - N_{1.} \qquad (3)$$

$$N_{00} = N_{0.} - N_{01} \qquad (4)$$

$$N_{10} = N_{1.} - N_{11} \qquad (5)$$

Identification and selection bias in the intergenerational correlation

The length of the observation window influences the magnitude of the correlation. Using short observation windows for either parents or children can lead to estimates of intergenerational correlation that are biased in either direction (see Page, 2004).[3] There are two sources of bias when using a shorter observation window, one relating to the identification of recipients and the other to selection. These two sources of bias operate in a rather complex way and the bias they cause for the intergenerational correlation depends on whether we are using a short observation window for parents or children, the proportion of social assistance recipients, and on the conditional probabilities of intergenerational social assistance. Hence, the direction of the bias in the intergenerational correlation relating to the length of the observation windows is essentially an empirical question.

When a short observation window is used for parents, a substantial number of households receiving social assistance for a short spell though not during the observation window are erroneously classified as non-recipients, leading to the identification bias. If parents' recipiency increases their children's probability to receive social assistance in adulthood, we can expect that misclassifying parents with a short social assistance spell as non-recipients leads to an upward bias in P_0. This is because when a positive intergenerational correlation is assumed, a larger proportion of these misclassified cases receive social assistance as young adults than of the true non-recipients. Therefore, the relative increase in N_{10} is larger than in N_{00}, increasing P_0. An upward bias in P_0 leads to a downward bias in the observed intergenerational correlation $P_1 - P_0$.

There is also a selection effect involved when using a shorter observation window for parents. With a shorter observation window, parents receiving long-term social assistance are over-represented as compared to parents who receive social assistance only for a short spell. The effect on

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[3] Page uses the term 'bias' as it is used in the studies of the intergenerational correlation of income. In this context, a longer observation window is assumed to better capture the theoretical lifetime incomes and shorter observation windows are assumed to cause biased estimates for the intergenerational correlation of (lifetime) income. It is perhaps impossible to define an equivalent definition, the lifelong social assistance recipiency, for a dichotomous variable like social assistance. For the sake of clarity, we use the term bias in the same way as Page for describing the under- and overestimation related to the length of observation window.

the intergenerational correlation depends on whether the effect of growing up in a family receiving long-term social assistance is stronger than the effect of growing up in a family receiving temporary social assistance. If it is, then a short observation window for parents yields higher estimates for P_1 and leads to higher estimates of the intergenerational correlation. In (1) this means that with a shorter observation window for parents, the cases of $N_{\cdot 1}$ are selected in a way that a larger proportion of these cases are classified as N_{11} instead of N_{01}. Additionally, the upward bias of P_0 caused by the identification bias is smaller if long-term social assistance has a stronger association with later own recipiency than temporary social assistance.

When children's social assistance participation is observed with a short observation window, the misclassification of short-term recipients as non-recipients yields smaller estimates for both P_1 and P_0. In (1) and (2) this means that with a shorter observation window for children, more cases are classified as N_{00} instead of N_{10}, and more cases are classified as N_{01} instead of N_{11}. Page (2004) concludes therefore that the intergenerational correlation ($P_1 - P_0$) may be biased either way. However, if parent's social assistance recipiency is assumed to increase their children's probability to receive social assistance, then we can expect that with a shorter observation window for children, P_1 has more downward bias than P_0, yielding a *lower* intergenerational correlation. This is because relatively more cases in (1) are misclassified as N_{01} instead of N_{11} than there are cases in (2) misclassified as N_{00} instead of N_{10}. We can expect that the identification bias relating to a short observation window for children yields a lower coefficient for intergenerational correlation if the ratio N_{11}/N_{01} is bigger than the ratio N_{10}/N_{00}. In other words, if there is a positive intergenerational correlation in social assistance.

As with the parents, there is also a selection effect when using a short observation window for children. With a shorter observation window for children, $N_{1\cdot}$ contains relatively more long-term social assistance recipients and less temporary recipients. The effect on the observed intergenerational correlation depends on whether parental social assistance recipiency correlates more with own long-term recipiency than with temporary recipiency. If it does, then a shorter observation window for children yields upwardly biased estimates for P_1 and for the intergenerational correlation. This is because there is then less misclassification of cases into N_{11} into N_{01} than misclassification of cases in N_{10} into N_{00}.

All in all, if we assume a positive non-zero intergenerational correlation in social assistance recipiency, we can expect that the identification biases related to a shorter observation window for parents or children yield downwardly biased estimates for the intergenerational correlation. The selection biases supposedly cause an upward bias in the intergenerational correlation, but this depends on more uncertain assumptions pertaining to the significance of the duration of social assistance recipiency. Given the supposedly opposite directions of the biases, the total bias may be in either direction, depending on the empirical context.

In the following we use one-year and one-month observa-tion windows. This was dictated by the limitations of the data set: only calendar years and November of each year could be observed. Longer observation windows were not possible, because individual-level follow-up across years was possible only for those who had lived in a family receiving social assistance in 1990, not for the rest of the study population.

Intergenerational correlations and conditional probabilities of social assistance

In Table 2, each row represents an annual birth cohort 1973–1987, whose members were aged 3–17 in 1990 and aged 18–32 in 2005. The column $N_{\cdot 1}$ shows how many of them were living in a household that received social assistance during 1990, and P indicates the proportion of them who received social assistance during 2005. The conditional probabilities P_1 and P_0 are estimated as in (1) and (2). The intergenerational proxy correlation is estimated as $P_1 - P_0$. On the right hand side of the table, the same coefficients are estimated separately for boys and girls.

According to the Register of Social Assistance, 62 041 children aged 3–17 lived in a household that received social assistance in 1990. This yields over 4000 children for each birth cohort on average. In 2005, the members of the oldest birth cohort were aged 32, and the youngest were aged 18. Across all the birth cohorts, around 12 % received social assistance in 2005. Among those whose parents received social assistance in 1990, 26 % received social assistance in 2005, compared to 11 % among those whose parents did not receive social assistance in 1990. Both the unconditional and conditional probabilities for having social assistance were much higher among those aged 18–25 compared to those aged 26–32.

The intergenerational proxy correlation coefficients behave in a similar fashion according to age as the probabilities for having social assistance. The intergenerational proxy correlation is .15 on average over all the birth cohorts. The correlation varies substantially according to the age of observing the possible social assistance beneficiary, which is illustrated in Figure 2. The correlation is strongest at the age of 19, when it is .26, and after this the correlation decreases until the age 29, when it is .10. The unconditional and conditional probabilities, as well as the intergenerational proxy correlations, are stronger among boys than among girls. However, the coefficients draw a similar downward slope with age for boys and girls. Over all the cohorts, the intergenerational proxy correlation for boys is .19 and .12 for girls.

In Table 3 conditional probabilities and intergenerational proxy correlations are presented for each birth cohort using different observation windows for possible social assistance recipiency. According to the discussion in the previous paragraphs and to previous empirical findings (Page, 2004, 232), we can expect that a short observation window on children's social assistance recipiency results in lower estimates of intergenerational correlations. Estimates in Table 3 and Figure 2 indicate that our expectation is correct. Cross-sectional (one-month) measurement of children's social as-

Table 2
Intergenerational correlations and conditional probabilities of social assistance year 1990 - year 2005, by the birth cohorts and gender

| Age 1990	Age 2005	All					Girls					Boys				
		$N_{.1}$	P	P_0	P_1	$P_1 - P_0$	$N_{.1}$	P	P_0	P_1	$P_1 - P_0$	$N_{.1}$	P	P_0	P_1	$P_1 - P_0$
3	18	5005	.09	.07	.27	.19	2474	.10	.09	.28	.19	2531	.07	.06	.26	.20
4	19	4982	.15	.13	.39	.26	2435	.17	.15	.39	.23	2547	.13	.11	.39	.28
5	20	4849	.17	.15	.40	.24	2378	.18	.17	.37	.20	2471	.16	.14	.42	.28
6	21	5079	.18	.16	.37	.20	2512	.18	.17	.33	.16	2567	.17	.15	.40	.25
7	22	4745	.16	.14	.35	.20	2328	.16	.15	.30	.15	2417	.15	.14	.39	.25
8	23	4504	.14	.13	.30	.17	2244	.15	.14	.27	.13	2260	.14	.12	.33	.21
9	24	4129	.13	.12	.27	.15	1996	.13	.13	.24	.12	2133	.14	.12	.30	.18
10	25	4067	.12	.11	.25	.13	1976	.12	.11	.22	.10	2091	.12	.11	.28	.17
11	26	3802	.11	.10	.23	.13	1890	.11	.10	.21	.11	1912	.11	.10	.25	.14
12	27	3762	.10	.09	.21	.11	1859	.10	.09	.18	.09	1903	.10	.09	.23	.14
13	28	3673	.09	.09	.20	.12	1802	.09	.09	.17	.08	1871	.10	.09	.24	.15
14	29	3717	.09	.08	.18	.10	1859	.08	.08	.15	.07	1858	.09	.08	.22	.14
15	30	3546	.08	.08	.18	.10	1782	.08	.08	.16	.08	1764	.08	.08	.20	.13
16	31	3424	.08	.08	.17	.10	1646	.08	.08	.13	.06	1778	.08	.07	.21	.13
17	32	2757	.08	.08	.18	.10	1276	.08	.07	.14	.06	1481	.08	.08	.21	.13
All	All	62041	.12	.11	.26	.15	30457	.12	.11	.24	.12	31584	.11	.10	.29	.19

Table 3
Intergenerational correlations and conditional probabilities of social assistance 1990–2005, by the birth cohorts and observation period

Age 1990	Age 2005	November 1990 – November 2005					November 1990 – Year 2005					Year 1990 – November 2005				
		$N_{.1}$	P	P_0	P_1	$P_1 - P_0$	$N_{.1}$	P	P_0	P_1	$P_1 - P_0$	$N_{.1}$	P	P_0	P_1	$P_1 - P_0$
3	18	1665	.04	.03	.18	.15	1665	.09	.08	.31	.23	5005	.04	.03	.15	.12
4	19	1653	.05	.05	.23	.18	1653	.15	.15	.45	.30	4982	.05	.04	.18	.14
5	20	1555	.05	.05	.21	.16	1555	.17	.17	.46	.30	4849	.05	.05	.17	.12
6	21	1627	.05	.05	.19	.14	1627	.18	.17	.41	.23	5079	.05	.04	.16	.11
7	22	1573	.05	.05	.21	.16	1573	.16	.15	.40	.25	4745	.05	.04	.16	.12
8	23	1496	.05	.04	.18	.14	1496	.14	.14	.35	.21	4504	.05	.04	.15	.11
9	24	1361	.04	.04	.15	.11	1361	.13	.13	.32	.19	4129	.04	.04	.13	.09
10	25	1359	.04	.04	.14	.10	1359	.12	.12	.28	.16	4067	.04	.03	.11	.08
11	26	1268	.04	.03	.12	.09	1268	.11	.11	.25	.15	3802	.04	.03	.11	.08
12	27	1324	.03	.03	.10	.07	1324	.10	.10	.24	.15	3762	.03	.03	.09	.06
13	28	1206	.03	.03	.11	.08	1206	.09	.09	.23	.14	3673	.03	.03	.10	.07
14	29	1333	.03	.03	.10	.07	1333	.09	.08	.21	.12	3717	.03	.03	.08	.06
15	30	1221	.03	.03	.11	.08	1221	.08	.08	.20	.12	3546	.03	.03	.09	.07
16	31	1214	.03	.03	.11	.08	1214	.08	.08	.21	.13	3424	.03	.03	.08	.06
17	32	934	.03	.03	.11	.08	934	.08	.08	.20	.12	2757	.03	.03	.09	.07
All	All	20789	.04	.04	.15	.11	20789	.11	.11	.30	.19	62041	.04	.03	.12	.09

sistance leads to a lower intergenerational proxy correlation than a one-year observation window. When parents' recipiency of social assistance is measured cross-sectionally, the intergenerational proxy correlations are stronger than with a one-year observation window. This relates to the selection bias mentioned in the previous chapter: long-term recipients are over-represented in a cross-sectional snapshot. A similar selection effect is not observed when measuring children's own recipiency of social assistance. This suggests that selection into long-term recipiency correlates with parental recipiency in a similar manner as selection into social assistance recipiency generally.

Figure 2. Intergenerational correlations of social assistance according to age, with different lengths of observation windows for parents in 1990 and for children in 2005.
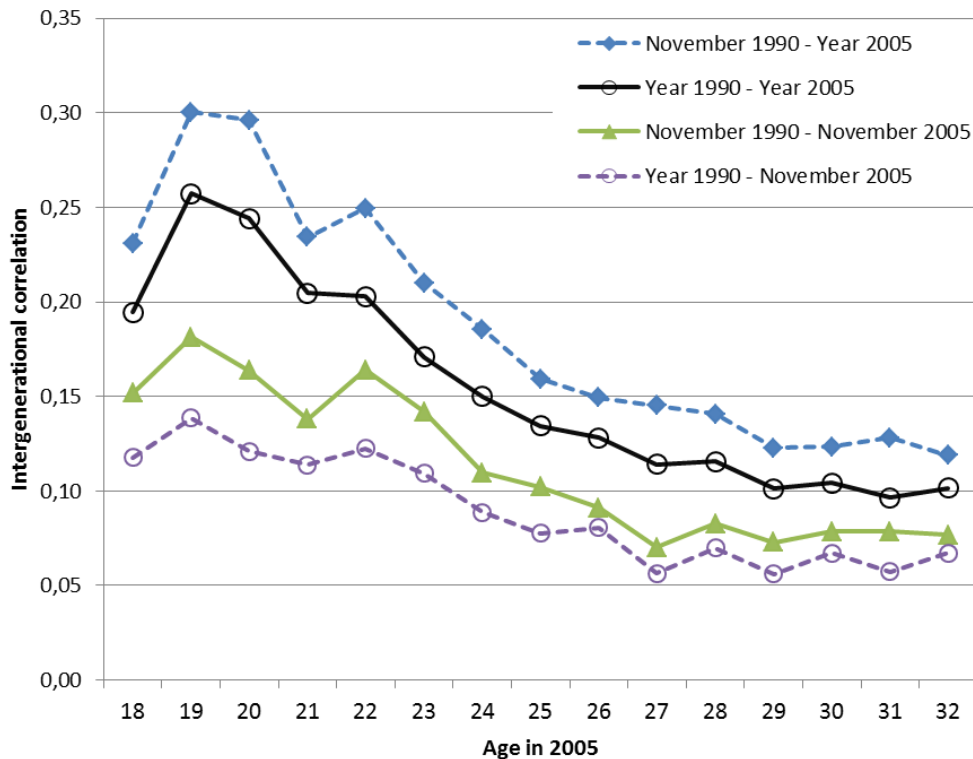
Discussion

The probability for receiving social assistance was over twofold higher (.26 vs .11) among those Finns aged 18–32 in 2005 whose parents had received social assistance in 1990 compared to those in the same age group whose parents had not received social assistance. The intergenerational proxy correlation of social assistance was .15 on average over all the birth cohorts, and stronger for males than for females. The correlation seems to be at roughly the same level as the observed correlations in other Nordic countries and Canada (Lorentzen & Nielsen, 2008; Stenberg, 2000; Beaulieu et al., 2005) and weaker than in New Zealand and the USA (Maloney et al., 2003; Page, 2004). However, accurate comparison is difficult, given differences in study designs. Our results parallel those of studies on the intergenerational correlation of income and the inheritance of poverty (Airio et al., 2005; Jäntti et al., 2006; Jenkins & Siedler, 2007). The intergenerational correlation of social assistance is by international comparisons low in the Nordic countries, as is the case with the intergenerational correlation of income and poverty.

Our results regarding the length of the observation window are in line with the results of Page (2004) and the US data. A shorter observation window of parents' social assistance recipiency resulted in a stronger intergenerational correlation, whereas a shorter observation window of children's own social assistance recipiency resulted in a weaker correlation. We used shorter observation windows than Page, but the conclusions are the same. In the measurement of parental social assistance recipiency in the Finnish context, the upward selection bias in the intergenerational correlation that was related to a short observation window seems to have been stronger than the downward identification bias. When measuring children's recipiency, however, the identification bias seems to have been stronger.

We found that the intergenerational correlation is dependent on the age of observing children's own social assistance recipiency. In the Finnish context, estimating the intergenerational correlation by observing the social assistance beneficiary of younger adults leads to higher estimates of intergenerational correlation. The estimates of intergenerational correlations are highest at the age when the children move out of their parents. This period in life is a time when people in general are in a precarious and vulnerable economic position and therefore parents' ability to give economic support plays a bigger role than in the later life. Parents who have never received social assistance are in general in a better economic position to support their offspring, who then do not have to turn to social assistance for help. Many of the previous studies have studied the intergenerational correlation using data consisting only of young adults and in this way they have likely over-estimated the intergenerational correlation in later life and over the whole population. Of course

the national features of the social assistance programs and its rules of eligibility have an influence on how the intergenerational correlation is associated with the age. (for example, see Page, 2004).

When comparing these results to the literature from intergenerational income mobility, it seems obvious that the length of the observation window and the life stage affect the results in a different way, depending on whether continuous (income) variables or nominal (social assistance) variables are used. Regarding the length of the observation window, a large body of studies has shown that the monthly or annual incomes are somewhat noisy proxies for lifetime earnings and the use of them yields downward biased estimates for the intergenerational income mobility (Solon, 1999; Björklund & Jäntti, 1997). However, in the case of social assistance, the selection bias pertaining to the short observation window of parental receipt of social assistance seems to outweigh this bias, leading to upward-biased estimates. In the case of the stage of the lifecycle, more recent literature has shown that the lifecycle variation in incomes has a substantial effect on the estimates of the intergenerational correlation. Haider and Solon (2006) showed that the intergenerational correlation (elasticity) is much weaker when a son's earnings are measured in their twenties, compared to the estimates when earnings are measured in their thirties. Even if we concentrate on the bottom income quintiles, the correlation between father's and son's earnings is lower in young adulthood than later in life (Couch & Lillard, 2004). As discussed earlier, young adulthood is a life stage when one's economic position is still taking form: many are studying or entering the labor market. Therefore, the intergenerational correlation of income is low in young adulthood. However, the intergenerational correlation of social assistance is stronger during the young adulthood, because parents' ability to give economic support during this precarious life stage plays a major role in whether the young adult has to turn to social assistance for help.

This study utilized a relatively simple data set, so several relevant time-related analyses could not be done. As an example, one thing influencing the intergenerational correlations of social assistance is the length of time between the observation windows for parents and children. A shorter time span between the observation windows might yield a higher estimate of intergenerational correlation. Additionally, our results are subject to the "classic" age/period/cohort problem, where it is difficult or impossible to distinguish between the effects of these three temporal factors by empirical means. Our data only include information on social assistance recipiency from two years, 1990 and 2005. Finally, we were not able to use longer than one-year observation windows. The importance of these temporal questions is left to be addressed in future studies.

For social policy purposes we should have as reliable a picture as possible on the intergenerational transmission of social assistance, as well as a clear picture of the possible mechanism behind it. This mechanism was not under analysis in this study, and we do not make any claims regarding it. As a correlation alone does not imply causality, our results do not necessarily mean that it is the experience of so-cial assistance recipiency during childhood or teenage years that affects their later recipiency. It is possible that other factors, correlating with parents' social assistance recipiency, are more important as determinants of later recipiency. However, when drawing (policy) conclusions from studies on intergenerational correlations, one should keep in mind that the correlation estimates are very sensitive to the length of the observation windows as well as to which life-stage of the children's social assistance recipiency is observed.

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