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uni Rokkansenteret
Stein Rokkan Centre for Social Studies

Report
3 - 2010

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ISBN 978-82-8095-069-7
ISSN 1503-4844

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UNI RESEARCH BERGEN

JUNE 2010

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Innhold

Oppsummering

Denne studien forsøker å gi svar på hvorvidt intergenerasjonell overføring av sosialhjelp skyldes sosialhjelpen i seg selv (fattigdomsfelle), eller om overføringen er forårsaket av observerbare og uobserverte kjennetegn ved familien. Videre ser studien på hvorvidt inntektsforhold i barndommen kan bidra til å forklare noe av det høye sosialhjelpsforbruket hos personer som har vokst opp i familier med sosialhjelpsmottak. Dette vil kunne gi svar på om det er økonomisk deprivasjon som er den egentlige årsaken til intergenerasjonell overføring av sosialhjelp. Helt til slutt gir studien svar på om den potensielt skadelige effekten av å vokse opp med sosialhjelp varierer med hvilken periode av barndommen man opplevde sosialhjelpsmottak og eventuell økonomisk deprivasjon.

En tidligere studie har vist at en høy andel av de som har vokst opp med sosialhjelpsmottak i familien selv mottar sosialhjelp som unge voksne (Lorentzen og Nielsen 2009). En avgjørende begrensning ved sistnevnte studie og flere andre lignende studier, er at de i liten grad har vært i stand til å skille ut hvilke elementer og faktorer som forårsaker denne typen sosial arv. Svært ofte vil man kunne tenke seg at det er bakenforliggende faktorer knyttet til familien som fører til at foreldregenerasjonen og generasjonen etter mottar sosialhjelp. Dersom man ikke er i stand til å identifisere disse faktorene direkte, vil man ha en situasjon der det tilsynelatende ser ut til at sosialhjelpen i seg selv fører til nytt sosialhjelpsmottak hos barn av sosialhjelpsmottakere, mens det i realiteten er bakenforliggende elementer som er årsaken.

Dersom det er karakteristika ved sosialhjelpen som er den direkte årsaken til at ytelsen overføres mellom generasjoner har man det som kan kalles en fattigdomsfelle. Det finnes flere ulike forklaringer på hvordan sosialhjelpen i seg selv kan føre til at barn av sosialhjelpsmottakere også blir mottakere av samme ytelse.

Direkte forklaringer:

For det første har man forklaringer som viser til at foreldres mottak fjerner barnas uvilje mot å leve av velferdsytelser. En slik type forklaring vil hevde at foreldre som mottar sosialhjelp fremstår som dårlige rollemodeller for barna. En relatert forklaring er at foreldres sosialhjelpsmottak gir barna førstehåndskjennskap til hvordan systemet virker, og således senker barrieren for eget mottak. En tredje forklaring relaterer seg til foreldrenes manglende tilknytning til arbeidsmarkedet. Barn av sosialhjelpsmottakere vil, basert på en slik forklaring, ha mindre kjennskap til arbeidslivet og arbeidslivets virkemåte. Følgen av sistnevnte er at barna allerede fra starten av har dårligere forutsetninger enn andre til å klare seg i arbeidslivet.

Økonomisk forklaring:

En alternativ forklaring til disse tre knytter seg til det økonomiske handlingsrommet som sosialhjelpsmottakere har. I følge denne forklaringen er det ikke sosialhjelpen i seg selv som fanger barna i en fattigdomsfelle, men mangelfulle økonomiske ressurser til å investere i barnas fremtid.

Uobserverte kjennetegn ved familien:

Den siste, men kanskje viktigste mulige forklaringen på at sosialhjelp går i arv er basert på at man i liten grad har kunnet skille de direkte effektene av sosialhjelpsmottak fra relaterte uobserverbare kjennetegn og egenskaper. Årsaken til at sosialhjelp går i arv kan i tråd med dette være egenskaper ved foreldrene som forårsaker både eget og barnas mottak.

For å løse den metodologiske utfordringen som ligger i å skille den kausale effekten av sosialhjelpsmottak fra kjente og ukjente kjennetegn ved familien som kan tenkes å påvirke eget og egne barns sosialhjelpsmottak, benyttes en såkalt søskenstudie. Søsken som har vokst opp med samme foreldre vil ha en hel del felles opplevelser og erfaringer som er avgjørende for om de blir sosialhjelpsmottakere. Her kan en, i tilegg til genetiske kjennetegn, tenke seg at faktorer knyttet til måten en utøver foreldrerollen på vil være felles for søsken. Videre vil ofte også foreldrenes sosiale og kulturelle kjennetegn, oppvekstbolig, nabolag og skole være felles for søsken. I en søskenstudie har man muligheten for å kontrollere for effekten av slike observerbare og uobserverbare kjennetegn som er felles for søsken. På den måten kommer man nærmere å identifisere de kausale effektene av kjennetegn og opplevelser som er unike for hvert av søsknene. I vårt tilfelle er sistnevnte knyttet til opplevelsen av foreldres sosialhjelpsmottak og inntektssituasjon på ulike stadier og tidspunkt i barndommen. En slik metodologisk tilnærming fungerer som et naturlig eksperiment ved at man kan skille mellom, på den ene siden kulturelle og biologiske faktorer ved familien, og på den andre siden effekter knyttet til økonomisk deprivasjon og sosialhjelp.

Datamaterialet som muliggjør en slik studie er hentet fra offentlige registre og samlet i SSBs FD-trygd database. Her finnes det tilgjengelig longitudinelle data som dekker hele den norske befolkningen fra året 1992 og frem til dags dato. Denne observasjonsperioden tillater oss å følge alle barn født mellom 1984 og 1989 gjennom barndomsperiodene 9–12 år og 13–16 år. Barnas egen sosialhjelpsstatus måles når de er 19 år. Tidligere forskning har vist at det er i denne alderen at risikoen for å bli førstegangsmottaker av sosialhjelp er på sitt høyeste.

Ved første øyekast kan spørsmålet om hvorvidt den intergenerasjonelle effekten av sosialhjelpsmottak er kausal eller indirekte se ut som et metodologisk spørsmål med liten sosialpolitisk relevans. Ved nærmere ettersyn kan svaret på spørsmålet vise seg å være av avgjørende betydning for hvordan man resonnerer rundt sosialhjelpen og problemer knyttet til langtidsmottak av sosialhjelp.

Man kan på den ene siden tenke seg at dersom det er ytelsen i seg selv (jf. direkte forklaringer) som skaper avhengighet, så vil sosialhjelpen fungere som en fattigdomsfelle. I slike tilfeller er det naturlig å tenke seg at løsningen på problemet vil kunne ligge i virkemidler som er rettet inn mot selve ytelsen. Økte krav og plikter knyttet til mottak av stønaden er en naturlig konsekvens av en slik tankegang. På den andre siden vil en forklaring som viser at det er økonomisk marginalisering (jf. økonomisk forklaring) som leder til overføring av sosialhjelp mellom generasjoner ha helt andre implikasjoner. Her vil det mest naturlige sosialpolitiske virkemidlet være økt økonomisk støtte. Helt til slutt, dersom overføring av sosialhjelp mellom generasjoner skyldes (uobserverte) kjennetegn ved oppvekstfamilien (jf. kjennetegn ved familien) vil

det kunne stilles spørsmål ved hvorvidt det er fornuftig å fokusere på problemer ved selve ytelsen. Her kan det i stedet være fornuftig å fokusere på de faktorer som leder til sosialhjelpsmottak i første omgang. I en slik situasjon vil det å avslutte en persons sosialhjelpsmottak ikke løse de problemene som førte til sosialhjelpsmottak i første omgang.

Oversiktsstatistikk (Tabell 1 og 2 i rapporten) viser at en svært høy andel av de som vokste opp med foreldre hvis hovedinntektskilde var sosialhjelp selv mottar sosialhjelp som unge voksne. Nesten 32 prosent av de som hadde en mor som mottok sosialhjelp når de selv var i alderen 13–16 år mottar selv sosialhjelp som 19 åringer. Noe færre av de som opplevde mors sosialhjelp i alderen 9–12 år havner på sosialhjelp. Det er likevel små forskjeller mellom de to barndomsfasene (9–12 og 13–16) når det gjelder forekomsten av sosialhjelp. Bildet er noe annerledes for fedrene, hvor det er en lavere prosentandel som ender opp på sosialhjelp dersom far mottok sosialhjelp under oppveksten. For fedre ser det ut som om sosialhjelp i oppvekstperioden 13–16 er mer avgjørende enn oppvekstperioden 9–12. Motsvarende er det mellom 3 og 4 prosent som mottar sosialhjelp som unge voksne dersom mor eller far hadde arbeid som hovedinntektskilde.

Hovedspørsmålet her er hvorvidt denne overføringseffekten er et direkte resultat av sosialhjelpen, eller om den skyldes uobserverte kjennetegn ved familien som påvirker både eget og barns mottak av sosialhjelp. Resultatene fra søskenstudien hvor vi kontrollerer for slike kjennetegn (tabell 5) viser tydelig at det ikke er noen direkte effekt av foreldres sosialhjelpsmottak på eget mottak.

Heller ikke inntektsdeprivasjon i barndommen har noen direkte innvirkning på risikoen for sosialhjelpsmottak som ung voksen.

I tråd med dette finnes det derfor ikke belegg for å si noe om i hvilken av de to barndomsfasene (9–12 år og 13–16 år) barn er mest sårbare for foreldrenes sosialhjelpsmottak.

Konklusjon:

Funnet av en høy forekomst av sosialhjelpsmottak hos barn som har vokst opp med sosialhjelp (som vist i Tabell 1 og 2) er i tråd med tidligere funn fra Norge, Sverige, Tyskland og USA. Likevel er det overraskende at denne intergenerasjonelle overføringen ikke er et resultat av en direkte effekt (kausalitet), men at det er kjennetegn ved familien som forklarer både foreldes egen og barnas mottak. Det er altså ikke slik at barn av sosialhjelpsmottakere "lærer" sosialhjelpsmottak av sine foreldre.

Det kan foreligge flere "uobserverte" bakenforliggende kjennetegn ved sosialhjelpsmottakerne som bidrar til en slik effekt. Fra andre kilder vet vi at mer enn 60 prosent av norske langtidsmottakere av sosialhjelp har dårlig psykisk helse, 50 prosent har andre helseplager og nesten 40 prosent er tidligere domfelte. Ut fra et intergenerasjonelt perspektiv kan man konstatere at det er lite som tyder på at sosialhjelpen i seg selv virker som en fattigdomsfelle mellom generasjoner. Snarer er det slik at problemene som ledet til sosialhjelpsmottak i første omgang er det som utgjør den største faren for intergenerasjonell overføring av sosialhjelp. På individplan er det derfor lite som tyder på at det å forlate sosialhjelpen i seg selv er noen løsning, så lenge problemene som forårsaket sosialhjelpsmottak i første omgang fremdeles er tilstede.

Introduction

Seen from an international perspective, Norway has comparatively few people living in economic hardship (OECD, 2008). Even so, poverty, and particularly child poverty, receives considerable attention from Norwegian politicians, who specifically target efforts directed toward children as a means of preventing intergenerational transfer of income inequalities (St.prp. nr. 1, 2006–2007).

Whereas economic hardship may be stressful while it lasts, its future consequences are equally problematic. It is well documented internationally that economic disadvantage is passed from one generation to the next. In a Norwegian context, the study of cross generational transfer of social assistance receipt is a test of whether political attempts to cut the tie between social background and life chances of citizens have been successful.

This study attempt to unveil to what degree growing up with social assistance receipt during childhood years is connected to the uptake of own social assistance receipt in early adulthood. Moreover, by means of a fixed effects sibling approach, we attempt to identify whether the intergenerational transfer is a causal effect of social assistance, or caused by unobserved family endowments. Furthermore, the study attempts to distinguish potential social assistance effects from the effects of income, or lack thereof, during childhood years. Lastly, the study elaborates at which childhood stages the potential negative effects of social assistance and economic deprivation is most detrimental.

Analyses are performed by means of a register-based longitudinal data set that covers the whole Norwegian population from the year 1992 and is continuously updated. The FD-Trygd database allows the follow-up of individuals and family members along practically all areas of life; spanning from educational careers to work and social security benefits. This rich material overcomes some of the earlier flaws of data sources utilized in comparable sibling studies, by eliminating potential problems of limited sample sizes and high attrition rates.

In order to solve the methodological challenges of separating the effects of the benefit in question from its correlates, a conditional (fixed effects) logistic regression model utilising sibling differences is applied. Sibling difference models take account of the fixed unobservable endowments that are shared by siblings from the same family (Francesconi et al., 2005). Siblings have in common many of the characteristics relevant for becoming a social assistance recipient, such as exposure to the same parenting style, parents' social and cultural environments, housing, and often neighbourhoods and schools. Fixed effects analyses of siblings allows for control of unobserved and observed effects that are common to siblings, but also identify the effects of experiences that potentially are unique to each sibling, e.g. experiencing social assistance and low income at certain ages. Hence, by adopting a sibling approach, we try to mimic the

setting of a natural experiment, thus, separating the biological and cultural effects of the upbringing from the effects of material deprivation and social assistance.

Background

The intergenerational transfer of economic disadvantage has been defined and studied in several different ways. However, three different main approaches can be identified (Jenkins & Siedler, 2007). First, there are studies of poverty transfer between generations. Such studies apply binary measures of poverty status, with an individual being defined as poor when income reaches below a poverty line. Second, there are studies of the transfer of income status, where income is measured as a continuous variable. Third, and less commonly, researchers may identify economic deprivation by categorical measures of income or other transformations of income. The latter is often defined as welfare receipt, such as social assistance or other means tested benefits. Here, we follow the latter of these strategies when we scrutinise the mechanisms leading to the intergenerational transfer of social assistance receipt.

Researchers have long sought to shed light on the mechanisms that transmit inequality between generations. These mechanisms may be found in a multitude of factors that are transmitted between generations, such as financial, material, and environmental assets, human capital; and attitudes, cultural, and other knowledge and traditions (Harper et al., 2003). In the case of benefit dependency, there is a growing field of literature dealing with the factors that accounts for the transmission of inequality between generations. Here, one of the main methodological challenges is whether these effects are caused by the benefit in question, or whether they are caused by its correlates, such as lack of income, little education, or culture of poverty. The body of evidence on this kind of transfers is ambiguous and highly context-dependent (Solon, 1999). Hence, a persistent concern with much of the existing literature is that the estimated effects might be spurious, caused by the mutual association between receipt of benefits (e.g., parents' social assistance) and unmeasured "true" causal factors, such as parental ability, diligence, mental health, or preferences (Levy & Duncan 2000).

Sibling studies present an attractive solution to several of these challenges, because such studies take account of the fixed unobservable endowments shared by siblings from the same family. Sibling studies have been used widely within several branches of mobility research, focusing on adult outcomes such as: personality, health, social attitudes, educational attainment, and socioeconomic outcomes (Conley et al., 2007). To our knowledge, there exist no known sibling studies dealing with the intergenerational transfer of social assistance. This is unfortunate, because a substantial part of the explanatory models used to explain the intergenerational transfer of welfare services is focused on the importance of, often unobserved, internal family processes. These explanatory models are presented in more detail below.

Social assistance in Norway

Social assistance benefit in Norway is the final safety net to provide relief for individuals in economic hardship. As in other European nations—though perhaps even more so in Norway—the provision of social assistance is a local responsibility and the benefits are means tested (Gough et al., 1997; Seip, 1994). The guidelines for giving social assistance are quite broad, and individual caseworkers enjoy a great deal of autonomy in determining the nature and quality of services (Gough et al., 1997; Lødemel & Trickey, 2001). The minimum age for independent claims is 18. Entitlement is based on the principle of domicile, and therefore foreigners who are legal residents are entitled to aid. Although the benefit is meant to supply temporary economic relief, there are no time limits, so entitlement remains for as long as needs last and conditions are met. In a comparative perspective, benefits are generous, but not as generous as in other Scandinavian countries. There has also been a recent change in the relationship between what Gough et al. (1997) characterize as "carrots" and "sticks". Norwegian authorities are currently placing a stronger emphasis on the responsibilities of social assistance recipients. Following this, claimants must seek and be willing to take work offered. Beneficiaries may also be asked, or required, to participate in qualification programs offered by labour market authorities or municipalities (St.meld. nr. 9, (2006–2007)).

In most cases, social assistance works as a temporary economic relief for recipients, and the majority of social assistance spells are of a brief duration. Median duration for first-time recipients is 2 months, and almost 95 percent of these spells ends within a year (Dahl & Lorentzen, 2003). More than 60 percent of these recipients do, however, return to social assistance one or more times. Only 36 percent of the first-time recipients receive social assistance once over a five year period, 42 percent have 2–4 social assistance spells, while 36 percent experience more than 5 spells (Dahl & Lorentzen, 2003). It is unlikely that short single spells on social assistance has severe negative long-term consequences for the recipients and their children. Consequently, recipients experiencing recurrent spells, together with recipients with spells that are of long durations, constitute the primary risk group for passing economic disadvantages to their children. Partly as a result of the high degree of individual caseworker discretion, there is only limited overlap between income poverty (measured at 50 percent of median income) and social assistance receipt. Only approximately 1 percent of Norwegian children below the age of 17 years are both considered to be poor and live in a household receiving social assistance, whereas almost 2 percent are poor without living in a household receiving social assistance (Ytrehus, 2004). Six percent of children in Norway live in social assistance households but are not considered poor (ibid.).

Theories and empirical studies

The objective here is to identify the intergenerational effect of growing up in families receiving social assistance. This is particularly interesting to do in a social democracy such as Norway, because it is expected that the extensive welfare services and universal school system will compensate for some of the disadvantages of growing up in such families. One of the reasons behind this particular belief is that in Norway the uneven distribution of cultural capital among families is greatly neutralized, because much of the cognitive stimulus has been shifted from parents to public care providers that do not replicate social class differences Esping-Andersen (2004).

Income mobility

When it comes to income mobility between generations, the Nordic countries seem to be among the most mobile societies, while countries like the United States and the United Kingdom are far less mobile (Jäntti et al., 2005). Corak (2004) states that in the United States and the United Kingdom at least 40 percent of the economic advantage high-income parents have over low-income parents is passed on to the next generation. In the Nordic countries less than 20 percent of the income advantage is being passed on between parent and child. Interestingly, there seems to be a tendency to a decreasing intergenerational mobility in the United States (Bratsberg et al., 2005). Conversely, Norwegian researchers find that there has been an increase in the intergenerational mobility during the last decades (ibid.). Over time the increase in intergenerational mobility in Norway has been strongest in the lower income groups. In a sibling study, Björklund et al. (2004) find that the sibling correlation in the Nordic countries is rather small, varying from about 0.15 to 0.25 for men, and from about 0.12 to 0.15 for women. This way of eliminating unobserved family influence shows that family and community constitute for less than 25 percent of the variation in income. The pure income influence is probably substantially smaller, which indicates that the 20 percent income advantage described earlier also is caused by income correlates.

A comparative analysis on intergenerational earnings mobility in the Nordic countries, the United Kingdom and the United states strengthens the impression of the Nordic countries being the most mobile, while United States is the least mobile (Jäntti et al., 2005). The study shows that the Nordic countries are characterised by significantly higher intergenerational income mobility than the United States, while the United Kingdom bears a closer resemblance to the Nordic countries than to the USA. The main finding is that most of the cross-country difference is confined to rather limited parts of the earnings distribution. The difference between the Nordic countries and the USA is mainly caused by the low downwards male mobility from the top to the bottom in the latter country. Moreover, the upwards mobility for sons from low income families in the USA is substantially lower than in the Nordic countries and the United Kingdom. To our knowledge, this is the only study of intergenerational earnings mobility where data has been especially compiled for comparative purposes.

Benefit dependency

Several models have been developed to explain the direct effects of benefit dependency. Most of these were, however, developed in different contexts to those in Norway. Hence, models that explain the transfer of benefit dependency by referring to a culture of poverty presuppose the existence of underclass neighbourhoods (See Mead, 1986; Wilson, 1987 and 1997). Norwegian research reveals little evidence of a culture of poverty or underclass neighbourhoods, but Raaum et al. (2006) found that neighbourhoods matter, even though the influence is far less important than in the United States. These findings make it doubtful that the application of theoretical frameworks emphasizing underclass neighbourhoods is relevant in a Norwegian setting. Consequently, we have chosen to focus on theories that emphasize the within-family transmission of disadvantageous traits between generations.

Within this framework, there are at least four different reasons why welfare receipt might promote dependency among future generations; three of them directly related to social assistance, and one indirectly via economic deprivation. The most frequently discussed idea is that parents' participation may lower children's distaste for welfare (Page, 2004). According to the role model theory, low-income parents develop values, norms, and behaviours that make them bad role models for their children (Brooks-Gunn et al., 1997). Hence, growing up in such families creates an understanding that social assistance is a legitimate source of income. Another reason is that such children may face lower participation costs as adults because they will already have had first-hand experience of how the system works (Page, 2004). In this case it is knowledge of the system and its compensation rates that is decisive for the children's future receipt of social assistance. A third explanation is that parents' participation reduces their informal access to job opportunities (Page, 2004). Welfare parents are less connected to the labour market, so their children may be less likely to learn about jobs that are available, useful job search strategies, or proper work etiquette. The fourth explanation is related to the income situation in families on social assistance, where lack of sufficient economic means may lead to insufficient investments in children's human capital (Becker & Tomes, 1986).

The literature on intergenerational transmission of welfare receipt is less extensive than the literature on income and earnings mobility. Most of the research on this field is done with American data, and only a few studies have been carried out in other countries. Duncan et al. (1988) found that welfare programs seemed to reduce work effort to some extent. The evidence, however, suggested that the welfare system did not foster reliance on welfare but rather acted as insurance against temporary misfortune. Antel (1992) reached the opposite conclusion when finding that, after controlling for observed and unobserved heterogeneity, a mother's welfare participation increased her daughter's later welfare dependency. Based on this, the author concluded that in the absence of some counteracting policy, welfare dollars spent today will increase welfare expenditure tomorrow. Pepper (2000) reached a similar conclusion in a study of welfare receipt among persons growing up in households receiving Aid to Families with Dependent Children. Although not being conclusive, the author claimed that the results strengthened the evidence that being exposed to AFDC as a child increased both the

probability and duration of welfare participation. Supporting the latter two studies, a German analysis concluded that there was a direct effect between parental welfare during late childhood and social assistance receipt later in life (Siedler, 2004). The study further stated that experiences of life in a single-parent family and parental unemployment during childhood had no significant association with children's propensity to receive social assistance as young adults. Moreover, daughters had a higher propensity of receiving social assistance than sons.

Some American research on welfare mobility found that income, or lack of income, during upbringing was the causal factor triggering welfare dependency (McLanahan, 1988; Rank & Cheng, 1995). In line with this, Vartanian and McNamara (2004) found that those who received welfare for an extended period as young adults had the same pre-transfer income over a 10–20 year period as those who were poor but did not receive welfare as young adults. They concluded that it was income level as a young adult, together with unemployment rate in the area of residence but not welfare receipt that affected long-term income and marital outcomes. In Norway, Hansen and Vibe (2005) studied the effects of parents' income and education on children's receipt of social assistance. Children from the most disadvantaged families had 10 times the risk of becoming social assistance recipients than children from the most economically resourceful families. The source of income was of importance for children's outcomes. Research has shown that income from work improved children's outcomes, whereas welfare income had negative effects on future earnings and hours of work (Corcoran et al., 1992). This finding implies that parental income is related to unobserved parental characteristics, and that failing to control for these may lead to biased income effects.

An interesting study, both methodologically and empirically, is the study by Corcoran and Kunz (1997) of whether out-of-wedlock teenage childbearing led to adult poverty and welfare dependency among African American teens. Utilizing a sibling approach, the authors found that much, but not all, of the observed association was due to unmeasured family characteristics. A serious drawback of this study was the limited number of siblings available for the analyses.

In a Swedish study social assistance recipients were divided into two groups, according to whether they were facing purely financial problems, or were also having behavioural problems (Stenberg, 2000). Interestingly, the author found that there was a high risk of intergenerational transmission of social assistance only when poverty (measured as receipt of social assistance) was combined with other social and individual problems. Hence, for children where receipt of social assistance was caused purely by economic problems, social assistance lost most of its intergenerational effect. This study also has important implications for the political measures directed at social assistance recipients in the Nordic countries. In such countries, where there are generous universal benefits, families that rely on social assistance are more likely to be those who are experiencing social problems. Hence, for this group, money alone might not be an efficient means to increase intergenerational economic mobility. This might also be the reason why Stenberg (2000) found less mobility from social assistance in Sweden than in the United States.

Summing up the literature on welfare mobility gives no compelling evidence for whether there is a true causal effect from being raised in a welfare receiving family or

not. It is, however, important to be aware that there is a difference between a true causal effect and the between-generations statistical association demonstrated in some of these studies. A true causal connection exists only if parental welfare status per se alters the child's outcome (Gottschalk, 1990). Only a few of these studies explicitly took account of unobserved heterogeneity originating in the family of upbringing. Moreover, the different conclusions reached by these studies may have been caused in part by the fact that they were performed under different welfare state conditions. Lastly, the quality of data and sample sizes available for several of the studies were less than ideal to permit causal inferences.

Data, analytical approach and methodology

Data are drawn from the register-based longitudinal database FD-Trygd that records details of the complete Norwegian population starting from the year 1992. This study uses data for the period 1993 to 2008, thus covering a span of 16 years. Because FD-Trygd contains information from a considerable number of different registers, it enables us to assemble complete individual trajectories covering several years and life phases. The database contains information on the following areas: demography, social security benefits, social assistance, work activity, unemployment, income, and assets. The last two are drawn from official tax and income registers. In addition, we have incorporated into this data set information on educational careers.

The research on intergenerational welfare effects has been criticized on a number of grounds. First, because of data limitations most analyses have measured parental welfare receipt only or mostly during a child's adolescence, rather than during all of childhood (Corcoran, 1995). Second, small data samples have restricted the opportunities to utilize statistical designs that allow causal interpretations (Levy & Duncan, 2000). The restricted observation window in our study only allows the identification of childhood experiences from the age of 9 years. This is unfortunate because important aspects of child development occur in early childhood. Thus, the results cannot be generalized for the entire childhood period.

The multivariate analyses are based on two separate specifications. Starting out with the initial model, a simple logistic regression with outcome measured as social assistance at age 19 (dummy variable) is specified. If key parental characteristics are observed and measured without error, this estimation of intergenerational transfer of social assistance will be unbiased. If, however, there are unobserved parental characteristics that influence their own and their children's social assistance receipt, the estimates will be biased, thus leading to an upward bias of the intergenerational transfer of social assistance.

If these unobserved parental characteristics are constant and occur at the same level for both siblings, then estimating a fixed effects model based on within-family variation between siblings will eliminate the bias. We follow the example of Levy and Duncan (2000) in order to separate out the effects of stable and time-varying parental characteristics. Hence, if parental characteristics consist of both constant and time-varying elements, constant elements will be the same for both siblings. The family fixed effect is differenced out by the fixed effects approach. Following this, time-varying characteristics remain in the model because they are different for each child. The specification of time-varying parental variables is presented in more detail below. Comparing the estimates from estimation approach 1 (logistic regression) with the estimates from approach 2 (conditional logistic regression) will enable us to identify the

potential effect of unobserved constant family endowments on the transfer of social assistance receipt between generations.

Although minimizing bias caused by unobserved parental endowments, fixed effects sibling approaches may produce another type of selection bias because they require analysis of families with more than one child (Vartanian & Buck, 2005). This may differentiate families by cultural and class backgrounds. Hence, our results do not necessarily apply for one-child families. Furthermore, these models also do not account for unobserved sibling heterogeneity, such as individual ambition, or the effect of age differentials on the experience within the family (ibid.). Fixed effect models also do not control for unobservable, varying parental characteristics. Hence, fixed effects models do not control for situations where parents treat children differently for unobserved reasons (ibid.). We do, however, include information about birth order in order to adjust for this characteristic.

Empirical specification

Following the template of Levy and Duncan (2000), childhood phases are identified as preadolescence (9–12 years) and adolescence (13–16 years). The periods covering early childhood (0–4 years) and early middle childhood (5–8 years) are out of range for the available observation period. Although the inclusion of all childhood periods would be preferable, we assume that important parts of the parental influence over children occur during the childhood periods under study.

The specification of the dependent variable, social assistance receipt at age 19 (dichotomous), is guided by both empirical and practical concerns. Referring to the latter, the available register data contains data for the period 1993–2008 (1992 was eliminated because income data were unavailable). Thus, in order to observe as many childhood periods for as many cohorts as possible, the outcome variable is only measured at age 19. This leaves six full birth cohorts (1984–1989) for which we can observe both childhood periods: 9–12 years and 13–16 years. Sensitivity analyses are performed on 10 full cohorts (1980–1989) for the childhood period 13–16 years. The age of 19 years is preferred over younger or older ages because the occurrence of first-time receipt of social assistance is at its highest at age 19 (Lorentzen et al., 2010). Hence, a large proportion of the potential long-term recipients of social assistance will have entered the system before their twentieth birthday.

The data are organized as a set of matched-sibling pairs. As a result of this, single children are not included. Neither are siblings who are excluded from the specified birth cohorts under study. In practical terms, this means that the maximum sibling spacing is 5 years. In families with more than two siblings belonging to the defined cohorts, the second sibling is picked randomly. There are different approaches to whether sibling studies should include same gender or different gender siblings. A recent study has shown that sibling correlations do not vary by siblings' gender in studies of socioeconomic status attainment (Conley & Glauber, 2008). In line with this, we have chosen to include both same and different gender sibling pairs. Gender is, however,

controlled for explicitly in all multivariate analyses. Information about birth order of the siblings is included in all multivariate analyses. The birth order variable is recorded as first born, last born, or between first and last born.

Parents' social assistance status is registered in the variable "most important source of income" for each of the parents and for each of the two childhood phases. Here, we have combined information on the source and sum of income that constitutes most of the income for the particular childhood phase. For simplicity, income sources are divided into work, pension (age and disability), unemployment benefits, social assistance, and other sources. For the childhood-specific independent variables, the most important source of income is registered separately for each parent. This is done for two reasons; firstly, because each parent's status in the labour market can have a separate effect on the child (even if divorced), and secondly, because the register-based information about non-marital cohabitation is unreliable. Unfortunately, it is not possible to create trustworthy aggregated information about household income and income sources in cases where one or both parents live with a new partner without being married. This restriction also applies to parental income. Here, consumer price-adjusted total income after transfers and deduction of taxes is registered for each of the parents. We have chosen to rely on net total income including transfers, because this will provide precise information about the actual financial situation during childhood, and thus provide information in addition to the variable on income source. The progressive taxation system in Norway, together with well developed social security benefits, has an equalizing function that is not necessarily expressed through gross income from work. As mentioned in the presentation of the Norwegian social assistance system, social assistance receipt and poverty do not overlap much. Hence, there is little reason to expect that high correlation between social assistance as an income source and low income will cause any identification problems. Parents' marital status is also recorded for each of the childhood periods under study. The information is registered as a simple dichotomous variable, indicating whether the parents of the child were married or not married over each of the specified childhood periods.

The fixed effects approach has many valuable features; however, the cost of controlling for unobserved constant family endowments is that constant parent characteristics such as parental education and sibling spacing are cancelled out from the model together with the unobserved characteristics. Hence, we can only control explicitly for parental education and sibling spacing in the logistic regression. A related issue is the methodological restriction put on the effective sample used in the estimation that might potentially introduce new selection bias to the analyses. The fixed effects requirement of within-sibling pair variation in both the explanatory and dependent variables puts restrictions on the effective sample used in the estimation. Thus, only sibling pairs where we find sibling variation both in the independent childhood variables and the dependent social assistance variable are contributing to the fixed effects analyses. Possible implications for the generalizability and validity of the study are discussed in the results section.

Results

In Tables 1 and 2, the percentage of social assistance recipients at age 19 years is presented for each parent's income source over the childhood phases 9–12 and 13–16 years.

Table 1 Social Assistance Receipt at Age 19 by Mother's Income Source Over Childhood Stages 9–12 and 13–16

Mother's most important source of income	% receiving social assistance at age 19	
	Childhood period 9–12 years	Childhood period 13–16 years
Other	7.7	7.6
Work	3.6	3.8
Pension	12.4	13.0
Unemployment benefits	11.3	10.6
Social assistance	30.3	31.5

Note: N = 101 520. N consists of the 1984–1989 birth cohorts of paired siblings

Overall, the difference between the two childhood phases is minimal. As many as 31.2 percent of children whose mothers' social assistance benefits constituted the most important source of income over the childhood phase 13–16 years become social assistance recipients. There is, however, little difference in the distribution between the two childhood phases. Growing up with a mother receiving a disability pension (very few receive the elderly pension) is also associated with increased exposure to social assistance at age 19. This is in line with findings from a similar Norwegian study on social mobility (Hansen & Vibe, 2005). Mother's unemployment during childhood is also related to increased social assistance exposure at age 19. Not surprisingly, mother's work is the income source that is associated with the lowest percentage of social assistance receipt among the children. The "other" income source is a heterogeneous category covering all other sources of income. Having a mother without any specified income source is associated with a slightly lower risk of social assistance than for fathers (Table 2). This is probably caused by a higher percentage of homemakers in the former group.

Table 2 Social Assistance Receipt at Age 19 by Father's Income Source Over Childhood Stages 9–12 and 13–16

Father's most important source of income	% receiving social assistance at age 19	
	Childhood period 9–12 years	Childhood period 13–16 years
Other	9.9	9.9
Work	4.0	3.9
Pension	16.9	15.0
Unemployment benefits	14.3	15.6
Social assistance	20.1	24.2

Note: N = 101 520. *N* consists of the 1984–1989 birth cohorts of paired siblings.

A higher percentage of children who experienced fathers' social assistance during the childhood phase of 13–16 years receive social assistance than those experiencing it during the childhood phase of 9–12 years, although the percentage of recipients is lower than was found for mothers. Father's unemployment exposure seems to be more important for children's social assistance than the mother's exposure. As commented on above, the "other" category may have a different composition for men than for women. Hence, men belonging to the "other" category might be a more negatively selected group than women belonging to the same category because of the higher occurrence of homemakers among women. The latter might also explain why a higher percentage of children coming from this group of fathers receive social assistance than is found for mothers.

Both Tables 1 and 2 indicate that social assistance during childhood is strongly associated with the receipt of social assistance as a young adult. Remember also that, even though the risk of receiving social assistance is at its highest at age 19, there is probably a substantial proportion who will receive social assistance later in life. Hence, the reproduction rate presented here gives a conservative estimate of intergenerational social assistance mobility in Norway

Table 3 Descriptive Statistics in Percent, Compared by Social Assistance Status at Age 19

Variables		Social assistance receipt at age 19	No social assistance at age 19
		n = 4 860	*n* = 96 660
Mother's most important source of income 9–12 years	Other	12.8	7.8
	Work income	66.0	87.3
	Pension (age and disability)	6.3	2.2
	Unemployment benefits	3.5	1.4
	Social assistance benefits	11.4	1.3
Father's most important source of income 9–12 years	Other	3.1	1.4
	Work income	79.3	94.4
	Pension (age and disability)	7.7	1.9
	Unemployment benefits	3.2	1.0
	Social assistance benefits	6.7	1.3
Mother's most important source of income 13–16 years	Other	7.8	4.8
	Work income	70.5	89.8
	Pension (age and disability)	11.1	3.4
	Unemployment benefits	1.8	0.8
	Social assistance benefits	8.8	1.0
Father's most important source of income 13–16 years	Other	4.8	2.2
	Work income	75.5	93.0
	Pension (age and disability)	11.6	3.3

Variables		Social assistance receipt at age 19	No social assistance at age 19
		n = 4 860	*n* = 96 660
	Unemployment benefits	2.5	0.7
	Social assistance benefits	5.6	0.9
Mother's income at 9–12 years (NOK)	(mean over 4 years)	604 647	638 881
Father's income at 9–12 years (NOK)	(mean over 4 years)	693 586	980 895
Mother's income at 13–16 years (NOK)	(mean over 4 years)	695 983	772 609
Father's income at 13–16 years (NOK)	(mean over 4 years)	752 913	1 128 453
Birth order	First born	53.9	49.8
	Middle born	4.8	4.0
	Last born	41.3	46.2
Sex	Male	49.3	51.3
	Female	50.7	48.7
Marital status at 9–12 years	Parents not married	58.8	25.2
	Parents married	41.2	74.8
Marital status at 13–16 years	Parents not married	65.7	29.7
	Parents married	34.3	70.3
Mother's age at child's birth	First born (mean age)	23.8	25.7
	Middle born (mean age)	25.3	27.1
	Last born (mean age)	25.9	28.2
Mother's education	Primary/lower secondary	25.8	10.1
	Upper secondary, 1.	40.4	27.2
	Upper secondary, 2.	21.8	30.4
	Upper secondary, extension	3.1	12.1

Variables		Social assistance receipt at age 19	No social assistance at age 19
		n = 4 860	*n* = 96 660
	First stage tertiary, lower	3.5	14.7
	Tertiary, higher and PhD	0.4	3.1
	Missing education	5.1	2.3
Father's education	Primary/lower secondary	26.8	13.6
	Upper secondary, 1.	29.9	17.4
	Upper secondary, 2.	30.1	36.1
	Upper secondary, extension	3.8	12.1
	First stage tertiary, lower	2.7	8.8
	Tertiary, higher and PhD	9.8	1.7
	Missing education	5.0	2.3
Sibling spacing	Born same year	3.9	3.5
	1 year difference	20.2	13.4
	2 year difference	37.9	37.5
	3 year difference	24.4	29.9
	4 year difference	10.6	12.3
	5 year difference	3.0	3.5

Note: N = 101 520.

In line with what was shown in Tables 1 and 2, those with social assistance background (mother and father) constitute a relatively large share of social assistance recipients. Even so, the majority of social assistance recipients come from working parents. Hence, almost 80 percent of those who received social assistance at age 19 come from families where the father's most important source of income was work. Although children with working parents make up the bulk of social assistance recipients, all the other income groups are overrepresented among the social assistance recipients compared with non-recipients. Hence, children of pensioners are between 3 and 4 times overrepresented among those who receive social assistance at age 19 compared with the group of no receipt at age 19. Almost the same applies for children of the unemployed, where the overrepresentation is between 2.5 and 3.5 times. Finally, children of parents receiving

social assistance are between 6 and 8 times overrepresented in the social assistance category compared with the non-recipient category.

From the variables depicting parental income it is clear that men have higher incomes than women, that there have been substantial increases in real income over the period, and that those who receive social assistance come from families with lower incomes than others. The relative income difference between mothers who do and do not receive social assistance is, however, substantially less than for fathers. This is probably a result of child-specific social security benefits, where in most cases the mother is the recipient of economic support. Seen from a welfare perspective, these numbers indicate that the welfare state and the taxation system have an equalizing effect on children's economic circumstances.

Birth order is distributed slightly differently in the social assistance group than in the non-recipient group. In the former, 54 % of the siblings are first born, whereas first born only constitute 50 % of the latter group. A slightly higher percentage of women than men are in the social assistance group. Marital status of the parents is unevenly distributed between the two groups; almost 60 % of the social assistance recipients experienced non-intact families over the childhood phase 9–12 years, whereas only 25% of the non-recipients had the same experience. The picture is even more pronounced for the 13–16 year phase, with 66 % and 30 %, respectively.

Not surprisingly, the average age of mothers is lower for the first born child than for the middle and the last. More interesting, however, is the fact that mothers of social assistance recipients have a lower average age than mothers of non-recipients.

There are relatively large differences in parental education for the two groups; this applies both to fathers and mothers. Hence, whereas the predominant picture for non-recipients is a large percentage with higher education, the opposite is applicable for recipients.

The variable depicting sibling spacing shows that close siblings are slightly overrepresented in the social assistance group. This will not constitute a problem for the multivariate analyses provided we identify sufficient sibling variation in the childhood phase-specific variables.

Multivariate analyses

The first stage of the multivariate analyses is to run a logistic regression on the sibling sample. This will identify the factors leading to social assistance receipt at age 19 before identifying potential unobserved constant family endowments. Hence, the logistic model (Table 4) will present us with the gross effect of childhood environment, irrespective of unobserved family endowments, while the fixed effects approach (Table 5) will give potential net effects of childhood environment. Thus, comparing the estimates from the two approaches will shed light on the potential role of unobserved family endowments in the process leading to children's own social assistance uptake.

Given that there are two observations for each family, robust standard errors were calculated. The robust estimator of variance has the ability to relax the assumption of

independence of the observations. Hence, it produces correct standard errors in cases where observations are correlated, as occurs with siblings.

Model 1 presents the estimates for "most important source of income" for both parents over both childhood phases. Model 2 adds income for both parents and childhood phases. Thus, enabling the scrutiny of whether the effect of income is mediated by parental income source. Model 3 includes birth order, sex, and marital status of the parents. Model 3 is compared to the complete fixed effects specification in Table 5, since this excludes variables that are constant across siblings. This latter group of variables, parental education and sibling spacing, are introduced in Model 4 in the logistic regression.

Table 4 Logistic Regression Analysis on Social Assistance Receipt at Age 19, 1984–1989 Cohort

Variables		Model 1	Model 2	Model 3	Model 4
Mother's most important source of income 9–12 years	(Other=0)				
	Work income	0.626***	0.616***	0.649***	0.715***
		(0.04)	(0.04)	(0.04)	(0.04)
	Pension (age and disability)	0.929	0.901	0.978	0.940
		(0.10)	(0.10)	(0.11)	(0.11)
	Unemployment benefits	1.650***	1.608***	1.376**	1.343**
		(0.17)	(0.17)	(0.15)	(0.14)
	Social assistance benefits	2.522***	2.430***	1.532***	1.420***
		(0.23)	(0.23)	(0.13)	(0.12)
Father's most important source of income 9–12 years	(Other=0)				
	Work income	0.760*	2.215***	1.682**	1.241
		(0.09)	(0.50)	(0.32)	(0.21)
	Pension (age and disability)	1.222	3.324***	2.581***	1.735**
		(0.18)	(0.79)	(0.53)	(0.33)
	Unemployment benefits	1.596**	4.218***	2.663***	1.838**
		(0.25)	(1.01)	(0.56)	(0.36)
	Social assistance benefits	1.325	3.580***	2.171***	1.543*
		(0.19)	(0.84)	(0.44)	(0.29)
Mother's most important source of income 13–16 years	(Other=0)				
	Work income	0.841*	0.893	0.885	0.920
		(0.06)	(0.07)	(0.07)	(0.07)
	Pension (age and disability)	1.849***	1.962***	1.915***	1.696***
		(0.19)	(0.21)	(0.21)	(0.18)
	Unemployment benefits	1.907***	2.005***	1.613**	1.453*
		(0.28)	(0.30)	(0.24)	(0.21)

Variables		Model 1	Model 2	Model 3	Model 4
	Social assistance benefits	2.975***	3.176***	2.255***	2.034***
		(0.32)	(0.36)	(0.24)	(0.21)
Father's most important source of income 13–16 years	(Other=0)				
	Work income	0.594***	1.217	1.147	1.038
		(0.06)	(0.22)	(0.19)	(0.16)
	Pension (age and disability)	1.343*	2.734***	2.449***	1.825***
		(0.16)	(0.52)	(0.43)	(0.30)
	Unemployment benefits	1.687***	3.255***	2.551***	2.182***
		(0.25)	(0.68)	(0.49)	(0.40)
	Social assistance benefits	1.661***	3.171***	2.261***	1.786***
		(0.24)	(0.65)	(0.42)	(0.31)
Mother's income at 9–12 years			1.014	0.988	1.003
			(0.02)	(0.01)	(0.02)
Father's income at 9–12 years			0.887***	0.935***	0.955***
			(0.01)	(0.01)	(0.01)
Mother's income at 13–16 years			0.968*	0.981	0.982
			(0.01)	(0.01)	(0.01)
Father's income at 13–16 years			0.939***	0.967**	0.986
			(0.01)	(0.01)	(0.01)
Birth order	(First born=0)				
	Middle born			1.177*	1.095
				(0.09)	(0.08)
	Last born			0.983	0.903**
				(0.03)	(0.03)
Gender	(Male=0)			1.081*	1.074*
				(0.03)	(0.03)
Marital status at 9–12 years	(Parents not married=0)			0.731***	0.789***
				(0.04)	(0.05)

Variables		Model 1	Model 2	Model 3	Model 4
Marital status at 13–16 years	(Parents not married=0)			0.418***	0.434***
				(0.02)	(0.03)
Mother's age at child's birth				0.919***	0.951***
				(0.00)	(0.00)
Mother's education	(Primary/lower secondary =0)				
	Upper secondary, 1.				0.792***
					(0.04)
	Upper secondary, 2.				0.494***
					(0.03)
	Upper secondary, extension				0.305***
					(0.03)
	First stage tertiary, lower				0.300***
					(0.03)
	Tertiary, higher and PhD				0.252***
					(0.06)
	Missing education				0.700***
					(0.07)
Father's education	(Primary/lower secondary =0)				
	Upper secondary, 1.				0.974
					(0.05)
	Upper secondary, 2.				0.668***
					(0.03)
	Upper secondary, extension				0.403***
					(0.04)
	First stage tertiary, lower				0.486***
					(0.05)
	Tertiary, higher and PhD				0.361***
					(0.05)

Variables	Model 1	Model 2	Model 3	Model 4
Missing education				0.791*
				(0.08)
Sibling spacing				0.948***
				(0.01)

Note: N = 101 520.

$p < .05$. ** $p < .01$. ***$p < .001$.

Having social assistance as most important source of income during childhood clearly increases the odds ratio of becoming a social assistance recipient. This conclusion is valid over both childhood phases and for the income source of both parents. The effect is strongest for the period 13–16 years, for both mother's and father's income source. The effect remains, although reduced, even after introducing explanatory variables in Model 2, 3 and 4. Hence, in a situation where there are no unobserved family characteristics, the odds of receiving social assistance are between 40 and 100 percent higher if one of the parents had social assistance as their most important source of income during one of the childhood phases. After entering all variables, income from work is only significant for father in the phase 9–12 years. Interestingly, father's disability/pension status leads to an increased odds ratio of receiving social assistance over both childhood periods, while the last childhood phase leads to a significant increase for mothers. There is an unemployment effect of comparable magnitude. Although, the effect is particularly strong if father had unemployment benefits as his most important source of income over the period 13–16 years.

Several specifications of parental income have been tried (linear and dummy specifications) without altering the income effect. Here, and in the remaining analyses income is imputed as log transformed. This also has some major advantages over dummy specifications in the FE analyses where the estimator uses data less efficiently (Petersen, 2004). After introducing parental education in model 4, income is only significant for "father's income, period 9–12". As expected, a higher income leads to a decrease in the odds ratio of becoming a social assistance recipient.

In line with the results from the descriptive statistics, there is a weak negative effect from being the last born sibling. This effect should not be confused with the "within family" effect that is presented in the finite FE specification below. Women have a slightly higher odds of becoming social assistance recipients at age 19 than men. Parents' marital status has a very strong effect on the likelihood of becoming a social assistance recipient. After running all models, the odds ratio of becoming a social assistance recipient is 20 percent lower for those living with married parents over the childhood period 9–12 years. The odds of receiving social assistance for children coming from an intact home are less than half than those for children living in a broken home over the period 13–16 years.

Parental education is a powerful predictor for social assistance receipt. Moreover, the effects of mother's education are stronger than for father's education. Having a mother

with tertiary education leads to a 70 percent lower odds of receiving social assistance at age 19 than if mother had primary or lower education. The comparable number for father's tertiary education is approximately 50 percent lower odds.

Sibling spacing has a relatively weak but significant effect on the odds ratio of becoming a social assistance recipient. Hence, the more years between siblings, the lower is the risk of becoming a recipient.

In the analyses above, growing up in social assistance families has a relatively strong effect on own uptake of social assistance support, whereas the effect of parental income is significant only for father's income at the childhood phase of 9–12 years. The latter is not surprising, because Table 3 indicated that the relative income differences between fathers receiving and not receiving social assistance were larger than for mothers, thus allowing for more income variation among men. These effects will, however, be biased if there are unobserved parental characteristics that influence both parental social assistance receipt and their children's receipt. Consequently, to answer the questions posed in the introduction, we need unbiased estimates of (1) social assistance receipt during childhood, (2) income effects, and (3) childhood phase-specific estimates of the above.

The conditional logistic regression (FE specification) is presented in table 5. Here, we have run the same models as in the logistic regression, except from model 4 which included time-constant variables that are differenced out from the fixed effects specification. The odds ratio of the fixed effects model is interpreted as a "within group" effect. Hence, in this case the coefficients identify the sibling differences per se, and not differences between sibling pairs.

A drawback with the fixed effects procedure is that sibling pairs, where both have the same outcome on the dependent variable, do not contribute to the log likelihood, and have no effect on the estimation. Hence, the effective sample size of the estimation is greatly reduced. Although running the analyses on population data, the fixed effects model reduces the effective sample size from 101 520 to 7 052 observations. The stability of the estimates is demonstrated in the Appendix tables. Sensitivity analyses performed on the complete 1980 to 1989 cohorts, but restricted to the childhood phase 13–16 years is presented in the Appendix.

Table 5 Conditional Logistic Regression (FE specification) on Social Assistance Receipt at Age 19, 1984–1989 cohort

Variables		Model 1	Model 2	Model 3
Mother's most important source of income 9–12 years	(Other=0)			
	Work income	0.905	0.940	1.023
		(0.11)	(0.12)	(0.13)
	Pension (age and disability)	0.768	0.795	1.018
		(0.19)	(0.20)	(0.26)
	Unemployment benefits	1.071	1.087	1.026
		(0.23)	(0.24)	(0.22)
	Social assistance benefits	0.929	0.964	0.945
		(0.16)	(0.16)	(0.16)
Father's most important source of income 9–12 years	(Other=0)			
	Work income	1.017	1.167	0.917
		(0.26)	(0.33)	(0.26)
	Pension (age and disability)	0.798	0.927	0.939
		(0.25)	(0.31)	(0.32)
	Unemployment benefits	0.975	1.105	0.770
		(0.31)	(0.37)	(0.26)
	Social assistance benefits	1.077	1.221	0.906
		(0.32)	(0.39)	(0.29)
Mother's most important source of income 13–16 years	(Other=0)			
	Work income	1.218	1.272	1.246
		(0.18)	(0.20)	(0.20)
	Pension (age and disability)	1.304	1.384	1.635*
		(0.31)	(0.34)	(0.40)
	Unemployment benefits	0.684	0.710	0.640
		(0.20)	(0.20)	(0.19)

Variables		Model 1	Model 2	Model 3
	Social assistance benefits	0.946	0.996	0.969
		(0.19)	(0.21)	(0.20)
Father's most important source of income 13–16 years	(Other=0)			
	Work income	1.394	1.408	1.117
		(0.31)	(0.35)	(0.28)
	Pension (age and disability)	1.003	1.009	1.059
		(0.27)	(0.30)	(0.32)
	Unemployment benefits	1.297	1.305	1.066
		(0.40)	(0.42)	(0.35)
	Social assistance benefits	1.209	1.182	1.019
		(0.32)	(0.34)	(0.30)
Mother's income at 9–12 years			0.953	1.008
			(0.04)	(0.04)
Father's income at 9–12 years			0.965	0.981
			(0.03)	(0.03)
Mother's income at 13–16 years			0.958	0.985
			(0.03)	(0.04)
Father's income at 13–16 years			0.994	1.013
			(0.03)	(0.03)
Birth order	(First born=0)			
	Middle born			1.182
				(0.15)
	Last born			1.229*
				(0.10)
Sex	(Male=0)			1.083
				(0.05)
Marital status at 9–12 years				0.888
				(0.11)

Variables	Model 1	Model 2	Model 3
Marital status at 13–16 years			0.864
			(0.12)
Mother's age at child's birth			0.827***
			(0.03)

Note: N = 101 520. Effective sample used in the estimation = 7 052.

$p < .05$. ** $p < .01$. ***$p < .001$.

Table 5 shows that parents' social assistance receipt has no direct effect on children's own uptake of social assistance. All the social assistance effects are close to 1 and non-significant. The only significant income source effect is for those whose mothers' received pension over the childhood period 13–16 years. Children in this group have a higher odds ratio than "others" for receiving social assistance at age 19. This effect is, however, not significant in any of the fixed effects sensitivity analyses (Appendix Table 2 and 3).

The parental income variables, which potentially could account for some of the social assistance effect, are non-significant and close to 1. Thus, parental income has no causal effect on the risk of becoming a social assistance recipient. Neither does it account for any social assistance related income source effects.

In line with these results, the childhood phase when these occurrences took place is not decisive for the predicted outcome.

When birth order is analyzed within each family, the effect is more in line with expectations. Thus, first born siblings have a lower risk than others of receiving social assistance at age 19. The odds of becoming a social assistance recipient are 23 percent higher for last born siblings than first born siblings. These results remain stable also when including all cohorts born from 1980–1989 in Appendix Table 2.

Gender is no longer significant after controlling for unobserved family endowments, but the effect is of the same magnitude as in the logistic regression. When all available cohorts are included in Appendix Table 2, gender is significant, indicating that women have somewhat elevated risk of becoming a social assistance recipient compared with men.

Quite surprisingly, marital status, which was one of the most powerful predictors in the logistic regression, is no longer significant in the fixed effects analysis. This means that the effect of marital status is, in reality, an effect of unobserved family characteristics. Hence, the same unobserved characteristics that lead to social assistance receipt also lead to marital breakdown. The effect stays stable also after including all available cohorts (Appendix Table 2 and 3).

Mother's age when giving birth is a powerful predictor of social assistance; for every year increase in mothers' age, the odds are lowered by almost 20 percent.

Problems and limitations

The fixed effects specification uses all families with two or more siblings regardless of the age difference between children. As Levy and Duncan (2000) have pointed out, siblings close in age will have little variation in the childhood stage-specific variables. This may in turn explain the lack of significant parental social assistance and income effects. In order to examine this possibility, the fixed effects model was run on a subsample of siblings who were aged more than 3 years apart (Appendix Table 3). The effects of parental social assistance and income remained largely unchanged.

None of the variables depicting income source or income was significant in the fixed effects specification. There is, however, a possibility that mother's and father's incomes and sources of income have separate effects in intact and nonintact families. In Appendix Table 3, the results from two fixed effects analyses run on intact versus nonintact families are presented. None of the specifications changes the conclusions from the fixed effects specification in Table 5.

The reduction in the effective sample size seen above is an inherent property of all fixed effects models, but the reduction is more severe when analyzing binary rather than continuous outcome variables. In our case, only sibling pairs with different outcomes are included in the estimates. This is, however, not a very problematic restriction. A potentially more problematic limitation is the additional premise of sibling variation in the childhood phase-specific variables. Here, an objection can be that the group with parental variation in social assistance status during upbringing might be positively selected from the stock of social assistance-receiving parents. It is difficult to determine the magnitude of this bias, and some discretion is advised when drawing general conclusions from the study. The stability of the results has, however, been verified by linear fixed effects analyses that give the same results as the conditional logistic regression (results available on request).

Conclusion

In the introduction, several questions related to the intergenerational transfer of social assistance were raised. The first question was whether growing up with social assistance receipt during childhood years is connected to the uptake of own social assistance receipt. The answer to that question is affirmative; between 20 and 30 percent of those who experienced social assistance during childhood receive social assistance themselves at age 19. In contrast, between 3.5 and 4 percent of those who come from homes with working parents receive social assistance at age 19.

The second question was whether this potential transfer of social assistance between generations is a causal effect of social assistance, or whether it is caused by unobserved family endowments. The fixed effects analyses showed that after controlling for unobserved constant family characteristics, there is no direct effect of parental social assistance receipt. Some caution about the generalizability of this finding is in order; a restrictive interpretation will be that there is no causal effect for siblings similar to those included in the effective fixed effects estimate. A less restrictive interpretation will claim that these mechanisms are universal for all social assistance recipients, because the "inheritable" qualities of social assistance are present for all recipients.

The third question was whether the effect of social assistance in reality is an effect of income or economic circumstances during childhood. None of the income variables had any significant effects on the uptake of social assistance. Given the same possible reservations as above, the answer to question three is negative.

Because none of the childhood phase-specific variables were significant, the answer to question four will also have to be negative; there is no difference in the potential negative effects of social assistance and economic deprivation during specific childhood phases.

The finding of an intergenerational link in welfare and social assistance receipt is in line with several findings from Sweden, Germany, and the United States. The finding that there is no causal relationship is, perhaps, more unexpected. Swedish research does, however, draw the same conclusion (Stenberg, 2000). Contrasting with these results are findings from Germany and the United States where direct links are identified. This discrepancy might have two causes. Firstly, Sweden and Norway both have highly developed universal welfare state services. Thus, only those who fall through an extensive universal safety net end up as social assistance recipients. Consequently, many social assistance recipients in these countries have severe (unobserved) personal problems that are decisive for their children's trajectories as adults. Supporting this assumption is the fact that for Sweden the strongest predictors of receiving social assistance are mental problems and alcoholism (Hjalmarsson & Lindquist, 2008). In Norway we know that more than 60 percent of the long-term recipients have mental problems, almost 50 percent have physical health problems, and nearly 40 percent have

been convicted for criminal activity (van der Wel et al., 2006). These are factors that appear as unobserved correlates of social assistance in most analyses, but almost certainly amount to an important part of the intergenerational social assistance mobility. Supporting this assumption is the fact that for Sweden the strongest predictors of receiving social assistance are mental problems and alcoholism (Hjalmarsson & Lindquist, 2008). In Norway we know that more than 60 percent of the long-term recipients have mental problems, almost 50 percent have physical health problems, and nearly 40 percent have been convicted for criminal activity (van der Wel et al., 2006). These are factors that appear as unobserved correlates of social assistance in most analyses, but almost certainly amount to an important part of the intergenerational social assistance mobility.

The second explanation is methodological; different procedures or lack of measures to deal with unobserved family endowments clearly have consequences for the results. In this context, the sibling approach is considered one of the best measures of the effect of family background available (Conley & Glauber, 2008).

Seen from a methodological perspective, the results might lead to the questioning of the relevance of conventional analyses of intergenerational correlation or transfer of socioeconomic status. These might be of little value, as long as the mechanisms that mediate inequality between generations are invisible to the researcher. Thus, stating that social assistance, income, or socioeconomic status is transferred between generations may be of no avail, as long as the factors by which inequality is transferred are unknown.

Concerns about benefit traps are the key to the social assistance debate, and also to the rate-setting practices in many OECD countries (Adema, 2006). In line with this, several researchers argue that behaviour towards social assistance is determined by incentive structures, whereas the question of whether and how far these incentives have any empirical influence on the actual behaviour of people receives much less attention (Aust & Arriba, 2004). Judged from an intergenerational policy perspective, the recent development in making social assistance less attractive to potential recipients by tying claims and obligations to the benefit might be redundant as long as there is little evidence of any "lowered distaste for welfare" between generations. Moreover, if social assistance primarily works as a means to prevent economic hardship with few incentive-guided side effects, there is little reason to fear that the attractiveness of the benefit might cause intergenerational poverty traps.

In the logistic regression, parental education was a powerful predictor of social assistance receipt. Unfortunately, the explicit effect of parental education is differenced out in the fixed effects approach. Hence, it is not possible to identify the causal intergenerational effect of parental education in the current analyses. We did, however, witness that the effect of social assistance was greatly reduced when parental education was introduced in the logistic regression. An empirically weakly funded opinion is that some of the unobserved stable family endowments controlled for in the fixed effects analysis is connected to parental education. Ongoing political efforts to increase the education and qualifications of the recipients can, based on this assumption, have positive effects for both parents and siblings.

It is questionable whether measures to prevent "poverty traps" created by the benefit in question are beneficiary for this group. Said differently, there is little help in escaping social assistance as long as the problem causing social assistance receipt in the first instants remains intact.

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Appendix

Appendix Table 1 Logistic Regression Analysis on Social Assistance Receipt at Age 19, 1980–1989 Cohort, Childhood Stage 13–16 Years

Variables		Model 1	Model 2	Model 3	Model 4
Mother's most important source of income 13–16 years	(Other=0)				
	Work income	0.645*** (0.02)	0.667*** (0.03)	0.673*** (0.03)	0.749*** (0.03)
	Pension (age and disability)	2.070*** (0.09)	2.118*** (0.11)	2.092*** (0.11)	1.784*** (0.09)
	Unemployment benefits	1.788*** (0.12)	1.824*** (0.13)	1.454*** (0.11)	1.384*** (0.10)
	Social assistance benefits	5.021*** (0.27)	5.093*** (0.29)	2.640*** (0.15)	2.292*** (0.13)
Father's most important source of income 13–16 years	(other=0)				
	Work income	0.494*** (0.03)	1.265* (0.14)	1.302* (0.14)	1.050 (0.10)
	Pension (age and disability)	1.517*** (0.09)	3.733*** (0.43)	3.691*** (0.40)	2.315*** (0.23)
	Unemployment benefits	1.565*** (0.13)	3.735*** (0.47)	3.025*** (0.36)	2.160*** (0.24)
	Social assistance benefits	2.097*** (0.15)	4.998*** (0.60)	3.498*** (0.39)	2.432*** (0.25)
Mother's income at 13–16 years			0.981* (0.01)	0.971*** (0.01)	0.988 (0.01)
Father's income at 13–16 years			0.904*** (0.01)	0.942*** (0.01)	0.969*** (0.01)

Variables		Model 1	Model 2	Model 3	Model 4
Birth order	(first born=0)				
	Middle born			1.190***	1.135***
				(0.04)	(0.04)
	Last born			1.091***	0.999
				(0.02)	(0.02)
Sex	(male=0)			1.088***	1.089***
				(0.02)	(0.02)
Marital status at 13–16 years				0.345***	0.360***
				(0.01)	(0.01)
Mother's age at child's birth				0.919***	0.946***
				(0.00)	(0.00)
Mother's education					
	Upper secondary, 1.				0.703***
					(0.02)
	Upper secondary, 2.				0.488***
					(0.01)
	Upper secondary, extension				0.314***
					(0.02)
	First stage tertiary, lower				0.318***
					(0.02)
	Tertiary, higher and PhD				0.268***
					(0.04)
	Missing education				0.673***
					(0.04)
Father's education					
	Upper secondary, 1.				0.902***
					(0.02)

Variables		Model 1	Model 2	Model 3	Model 4
	Upper secondary, 2.				0.638*** (0.02)
	Upper secondary, extension				0.465*** (0.02)
	First stage tertiary, lower				0.501*** (0.03)
	Tertiary, higher and PhD				0.343*** (0.03)
	Missing education				0.756*** (0.05)
Sibling spacing					0.978*** (0.01)

Note: N= 272 970

Results are presented as odds ratios, standard errors in brackets.

p < .05. ** p < .01. *** < .001.

Appendix Table 2 Conditional Logistic Regression (FE specification) on Social Assistance Receipt at Age 19, 1980–1989 Cohort, Childhood Stage 13–16 Years

Variables		Model 1	Model 2	Model 3
Mother's most important source of income 13–16 years	(other=0)			
	Work income	1.018 (0.08)	1.028 (0.08)	1.036 (0.09)
	Pension (age and disability)	0.982 (0.12)	0.994 (0.12)	1.161 (0.14)
	Unemployment benefits	0.804 (0.11)	0.810 (0.11)	0.772 (0.11)
	Social assistance benefits	0.927 (0.10)	0.936 (0.10)	0.921 (0.10)

Variables		Model 1	Model 2	Model 3
Father's most important source of income 13–16 years	(other=0)			
	Work income	1.187 (0.15)	1.213 (0.17)	1.002 (0.15)
	Pension (age and disability)	1.095 (0.17)	1.120 (0.19)	1.118 (0.19)
	Unemployment benefits	1.320 (0.22)	1.348 (0.24)	1.068 (0.19)
	Social assistance benefits	1.253 (0.19)	1.280 (0.21)	1.064 (0.18)
Mother's income at 13–16 years			0.991 (0.02)	1.010 (0.02)
Father's income at 13–16 years			0.995 (0.02)	1.011 (0.02)
Birth order	(first born=0)			
	Middle born			1.216*** (0.07)
	Last born			1.215*** (0.06)
Sex	(male=0)			1.106*** (0.03)
Marital status at 13–16 years				1.013 (0.07)
Mother's age at child's birth				0.899*** (0.01)

Note: N= 272 970. Effective sample = 20 222

Results are presented as odds ratios, standard errors in brackets.

p < .05. ** p < .01. *** < .001.

Appendix Table 3 Conditional Logistic Regression (FE specification) on Social Assistance Receipt at Age 19, 1980–1989 Cohort, Childhood Stage 13–16 Years

Variables		Only intact families N = 193 074	Only non-intact families N = 64 490	Sibling spacing more than three years N = 88 808
Mother's most important source of income 13–16 years	(other=0)			
	Work income	1.069 (0.14)	1.172 (0.14)	0.922 (0.12)
	Pension (age and disability)	1.037 (0.20)	1.369 (0.24)	0.964 (0.18)
	Unemployment benefits	0.881 (0.21)	0.899 (0.17)	0.631* (0.13)
	Social assistance benefits	0.852 (0.29)	1.063 (0.15)	0.793 (0.15)
Father's most important source of income 13–16 years	(other=0)			
	Work income	1.288 (0.41)	1.067 (0.19)	1.101 (0.25)
	Pension (age and disability)	1.348 (0.46)	1.041 (0.23)	1.474 (0.38)
	Unemployment benefits	1.451 (0.55)	1.222 (0.27)	1.150 (0.32)
	Social assistance benefits	1.647 (0.64)	0.991 (0.20)	1.435 (0.39)
Mother's income at 13–16 years		0.888 (0.08)	1.017 (0.02)	1.041 (0.03)
Father's income at 13–16 years		0.990 (0.06)	1.018 (0.02)	1.005 (0.03)
Birth order	(first born=0)			

Variables		Only intact families N = 193 074	Only non-intact families N = 64 490	Sibling spacing more than three years N = 88 808
	Middle born	1.241** (0.10)	1.238* (0.11)	1.448* (0.27)
	Last born	1.202* (0.09)	1.237*** (0.08)	1.525* (0.25)
Sex	(male=0)	1.199*** (0.05)	1.032 (0.04)	1.044 (0.05)
Marital status at 13–16 years		-	-	0.916 (0.10)
Mother's age at child's birth		0.908*** (0.02)	0.898*** (0.02)	0.855*** (0.03)
		N = 193 074	N = 64 490	N = 88 808

Note: Results are presented as odds ratios, standard errors in brackets.

Effective sample: "Intact families" = 8 570, "Non-intact families" = 9 986, "Sibling spacing more than three years" = 6 306

$p < .05$. ** $p < .01$. *** $< .001$.

Economic hardship may be stressful while it lasts, but its future consequences are equally problematic. It is well documented internationally that economic disadvantage is passed from one generation to the next. In a Norwegian context, the study of intergenerational transfer of social assistance receipt is a test of whether political attempts to cut the tie between social background and life chances of citizens have been successful.

This study attempt to unveil to what degree growing up with social assistance receipt during childhood years is connected to the uptake of own social assistance receipt in early adulthood. By means of a fixed effects sibling approach, we attempt to identify whether the intergenerational transfer is a causal effect of social assistance, or caused by unobserved family endowments.

This study also attempts to distinguish potential social assistance effects from the effects of income, or lack thereof, during childhood years, and at which childhood stages the potential negative effects of social assistance and economic deprivation is most detrimental.

ISBN 978-82-8095-069-7
ISSN 1503-4844

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