



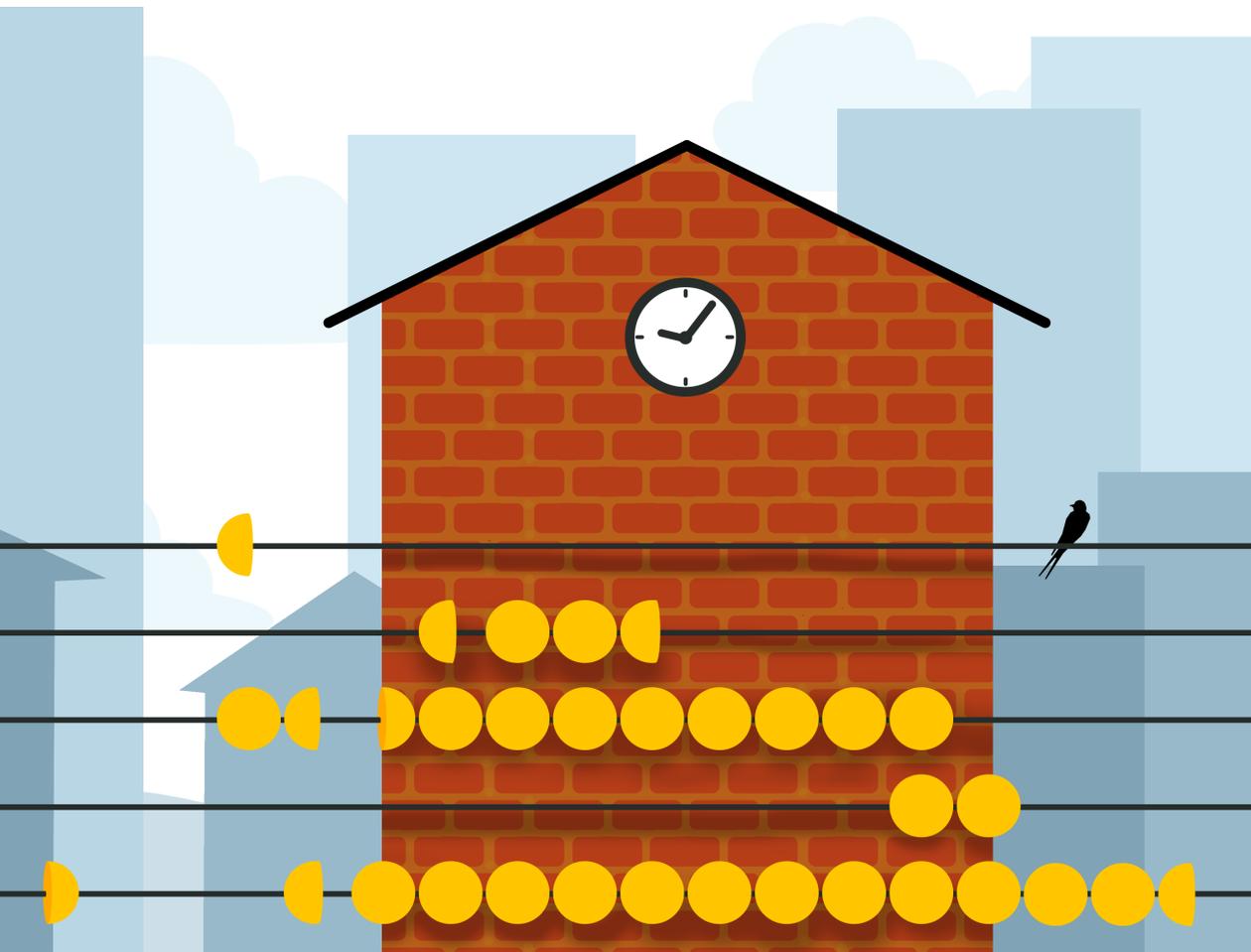
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Out-of-Home Care and Educational Outcomes

Prevalence, Patterns and Consequences

Marie Berlin



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Marie Berlin

Academic dissertation for the Degree of Doctor of Philosophy in Sociological Demography at Stockholm University to be publicly defended on Saturday 30 May 2020 at 13.00 in hörsal 3, hus B, Universitetsvägen 10 B, digitally via Zoom, see meeting address at www.sociology.su.se

Abstract

The aim of this thesis is to examine educational stratification in the context of out-of-home care (OHC; foster family care, residential care) and to place one of society's most vulnerable groups in the fields of social stratification and family complexity research. About 5% of the Swedish population experience OHC during childhood or adolescence. OHC is not only a matter of protecting children and youth; it is also intended to improve future opportunities and compensate for adverse childhood factors. However, a vast body of international research, including Swedish studies, shows that a substantial proportion of young people from OHC have poor school performance and low educational attainment as adults. Furthermore, this is strongly associated with their high risk of other adverse outcomes in life. To date there are no signs of improvement in this regard, and the disadvantage of having a low education is increasing in today's knowledge-based society.

Many previous OHC studies have relied on small, local samples, and longitudinal data are often lacking. In this respect, Swedish researchers are well positioned to contribute to the field through research based on our high-quality population registers. The main data source in this thesis – the Child Welfare Intervention Register – covers half a century of OHC data. Based on these data, an overview of OHC prevalence in Sweden and patterns of educational outcomes are presented in the introductory chapter. The thesis further consists of five individual studies investigating different aspects of the transition through the educational system to adult life among children and youth from OHC. Two of the five studies focus on children who spent most of their childhood in OHC and for whom society has assumed a long-term commitment of parental responsibilities.

The descriptive data show that patterns of poor educational outcomes in the OHC population have remained stable as long as they can be followed in the registers. Study I shows that youth who exited long-term care were disadvantaged as compared to youth without OHC experience, both in terms of educational attainment and regarding the strong association between poor school performance and other adverse outcomes in young adulthood. Up to 55% of their excess risks of later psychosocial problems were statistically attributable to dismal school performance. Study II shows that 54% of clients in substance-misuse treatment in the 1980s had been in OHC, half before their teen years and half as teenagers. In this group, OHC was associated with excess mortality during the 30-year follow-up from exit from treatment, with statistical significance mainly for females who had entered OHC before their teens. School failure was more common in the OHC population than for misuse clients without OHC experience, and was strongly associated with the excess mortality of females. Two Nordic comparative studies (Studies III and IV) show that the OHC population had a substantially higher risk of not completing upper-secondary education across countries, and that poor performance in primary school inflicted a greater risk in OHC youth of being NEET in young adulthood than for their peers without OHC experience. Study V shows that the intergenerational transmission of education was weak and inconsistent in the foster care setting, and that living in a highly educated foster family did not have a robust positive effect on foster children's educational outcomes.

Keywords: *out-of-home care, foster care, foster parents, school performance, educational outcomes, intergenerational transmission, Sweden, Nordic countries.*

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Cover picture: Emmanuel Berlin

The picture is a graphic representation of different care histories during childhood and adolescence to illustrate the heterogeneity in care experience. The straight lines that run through the figure symbolize the age span from birth to 20 years of age. The house represents the primary school years (age 7–16) and the beads represent time in out-of-home care (OHC). The top line is an example of early short-term care and is followed by early intermediate care, long-term care and teen care, while the bottom line is an example of care leavers from long-term care. The examples are based on average age at first entry into OHC, average time spent in OHC, and median number of OHC sequences, in the OHC sub-groups presented in the thesis.

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List of studies

- Study I Berlin, M., Vinnerljung, B. & Hjern, A. (2011). School performance in primary school and psychosocial problems in young adulthood among care leavers from long term foster care. *Children and Youth Services Review*, 33, 2489–2497.
- Study II Berlin, M., von Grieff, N., & Skogens, L. (2020). The relation between out-of-home care, early school failure, and premature mortality: A 30-year follow-up of people treated for substance misuse in Sweden. *Nordic Social Work Research*. DOI: 10.1080/2156857X.2020.1749119.
- Study III Kääriälä, A., Berlin, M., Lausten, M., Hiilamo, H. & Ristikari, T. (2018). Early school leaving by children in out-of-home care: A comparative study of three Nordic countries. *Children and Youth Services Review*, 93, 186–195.
- Study IV Berlin, M., Kääriälä, A., Lausten, M., Andersson, G., & Brännström, L. (submitted manuscript). Long-term NEET among young adults with experience of out-of-home care: A comparative study of three Nordic countries.
- Study V Berlin, M., Vinnerljung, B., Hjern, A. & Brännström, L. (2019). Educational outcomes of children from long-term foster care: Does foster parents' educational attainment matter? *Developmental Child Welfare*, 1(4), 344–359.

Sammanfattning

Syftet med den här avhandlingen har varit att bidra till ökad kunskap om hur barn och unga som varit placerade i familjehem eller på institution klarar sig i det svenska utbildningssystemet och hur det inverkar på deras fortsatta liv. Omkring 5% av dagens 20-åringar har någon gång under uppväxten (0–19 år) varit placerade i heldygnsvård. Avsikten med en placering är inte bara att skydda barn och ungdomar som riskerar att fara illa, utan också att kompensera för tidigare ogynnsamma uppväxtfaktorer och ge goda förutsättningar för en fortsatt positiv utveckling. Trots det så visar både internationell och svensk forskning att många barn och unga som varit placerade i social dygnsvård har låga eller ofullständiga grundskolebetyg, och låg utbildningsnivå som vuxna. Detta gäller även dem som har varit placerade under merparten av uppväxten. Forskning visar också att den höga förekomsten av låga skolresultat har starkt samband med deras höga överrisker för olika former av problem senare i livet, exempelvis missbruk, kriminalitet, psykisk ohälsa och social marginalisering. Utbildning har dessutom kommit att bli allt viktigare i dagens kunskapsbase- rade samhälle, och konsekvenserna av att tidigt halka efter i skolan riskerar därmed att öka.

Internationell forskning kring placerade barn och unga är ofta baserad på små och regionalt avgränsade datamaterial av tvärsnittskaraktär. I det avseendet är det svenska forskarsamhället väl rustat till att bidra genom våra nationella dataregister som håller hög kvalitet. Socialstyrelsens register över insatser till barn och unga är den huvudsakliga datakällan i den här avhandlingen. I dagsläget omfattar det ett halvt sekel (från 1968 och framåt) av social dygns- vård, det vill säga socialtjänstens heldygnsinsatser till barn och unga enligt Socialtjänstlagen, SoL (2001:453), och Lagen om vård av barn och unga, LVU (1990:52).

I introduktionen till avhandlingen ges en översikt av utvecklingen av andelen barn och unga som varit placerade under uppväxten, och av deras utbildningsmönster. Avhandlingen omfattar också fem individuella studier som undersöker hur skolresultaten i grundskolan inverkar på olika utfall senare i livet. Två av studierna är avgränsade till personer med erfarenhet av långvariga placeringar, och där samhället kan sägas ha haft ett föräldraansvar under stora delar av deras uppväxt. I flera av studierna jämförs de placerade med andra befolkningsgrupper som har en liknande socioekonomisk bakgrund som de

placerade, men som inte har varit placerade under uppväxten. I två av studierna jämförs placerades utbildningsvägar i Danmark, Finland och Sverige.

Översikten visar att mönstren av låga utbildningsutfall bland personer med erfarenhet av den sociala barnvården har varit stabila över tid så långt de kan följas i registren. Studie I visar att unga vuxna som varit långvarigt placerade och som lämnade placeringen som vuxna (myndiga) var missgynnade i förhållande till andra jämnåriga i befolkningen utan placeringserfarenhet. Både genom att så många hade låga eller ofullständiga betyg i grundskolan och genom att detta hade en så stark betydelse för olika ogynnsamma utfall senare i livet. Upp till 55% av de placerades överrisker för olika framtida psykosociala problem kunde statistiskt härledas till dåliga skolresultat i grundskolan.

Att risken för olika problem senare i livet är stor inom gruppen framgår också av Studie II som är avgränsad till klienter som var i missbruksvård under det tidiga 1980-talet, och där deras dödlighet följdes under en 30-årsperiod. Studien visar att 54% av klienterna hade varit placerade under uppväxten, varav hälften hade placerats innan tonåren. De placerade hade oftare hoppat av grundskolan och de hade också en högre dödlighet än övriga klienter. Dödlighetsörrisken var dock modest bland män och bara statistiskt signifikant bland kvinnor som varit placerade under den tidiga uppväxten (före tonåren). Att ha hoppat av grundskolan hade ett starkt samband med kvinnors överdödlighet även då resultaten justerades för andra faktorer som har starkt samband med dödligheten bland missbrukare.

I Studie III och IV jämförs utbildningsnivå och arbetsmarknadsetablering bland personer som varit placerade under uppväxten i tre nordiska länder: Danmark, Finland, och Sverige. Studie III visar att de som varit placerade saknade gymnasieutbildning i betydligt högre utsträckning än andra jämnåriga i alla tre länder: 76% vs. 24% i Danmark, 57% vs. 14% i Finland och 61% vs. 17% i Sverige. När resultaten justerades för socioekonomiska bakgrundsfaktorer så kvarstod 24–39 procentenheters överrisk att sakna gymnasieutbildning vid 23 års ålder. Studie IV visar att låga skolbetyg var vanligare bland de placerade i alla tre länder, och att detta hade samband med risken att vara långvarigt NEET (varken i arbete eller studier under två av tre år) i ung vuxen ålder (21–23 år). Ungefär en fjärdedel av dem som varit placerade var NEET i Danmark och Sverige, och ungefär en tredjedel i Finland, medan andelen som var NEET bland unga vuxna utan placeringserfarenhet låg mellan 6% och 7% i de tre länderna.

Studie V är avgränsad till långvarigt placerade som bott i samma fosterfamilj under merparten av grundskoletiden (minst fem år). Resultaten visar att sambandet mellan fosterföräldrars utbildning och fosterbarns utbildningsresultat inte är robust. För fosterbarn fanns inte en entydig positiv utbildningseffekt av att vara placerad i en fosterfamilj där fostermamman hade hög utbildningsnivå.

Introduction

The topic of this thesis is educational outcomes among children and youth from out-of-home care, i.e. foster family care or residential care. Out-of-Home Care (hereafter OHC or ‘in care’) is an intervention used by child welfare services in cases in which children or adolescents are considered to be at risk of impaired health or development due to their home environment, or for adolescents, their own disruptive behavior. About 5% of the Swedish population have experienced OHC in childhood or adolescence (Figure 2A). The OHC population is heterogeneous in regard to age at first entry and total time spent in care. Some enter care at a young age and live in a foster family for most of their childhood, while others stay for only a short period of time, as toddlers or teenagers, once or several times during their upbringing. The OHC population can be defined as one of society’s most vulnerable groups (Hessle & Vinnerljung, 1999). Many have faced different types of adverse childhood experiences, and care leavers often experience an accelerated and compressed transition into adulthood without the same support their peers who grew up in their home of origin typically experience (e.g., Stein, 2014).

In Sweden, the context of this thesis, OHC is not only a matter protecting children and youth; it is also intended to improve future opportunities by compensating for adverse upbringing factors. Still, a vast body of international research, including Swedish studies, shows that children and youth from OHC have high levels of poor school performance, low educational attainment as adults, and high excess risks of adverse development (e.g., Berridge, 2012; Kääriälä & Hiilamo, 2017; O’Higgins, Sebba, Gardner, 2017; Fries, Klein, & Ballantyne, 2014; Gypen, Vanderfaeillie, De Maeyer, Belenger, & Van Holen, 2017). This also applies to those who have spent most of their childhood in OHC. Results from Swedish studies show that 40–50% of children from long-term care leave primary school with no, or low, grades (Vinnerljung, Berlin, & Hjern, 2010).

Education has become increasingly important in today’s knowledge-based economies, and is the main factor in both upward social mobility and the reproduction of social status between generations (e.g., Hout & DiPrete, 2006). Generally, the Nordic welfare states have been successful in equalizing educational opportunities (e.g., Breen & Jonsson, 2007). However, in the light of previous research, these universal welfare regimes do not seem to have been

sufficient in providing the OHC population opportunities at a level comparable to that of their same-aged peers.

Studies on how upbringing factors affect children have a long tradition in sociology. Yet, children and youth from OHC are seldom considered (Wildeman & Waldfogel, 2014). It is surprising that this group, one of society's most vulnerable, has drawn such little attention outside the field of social work. It is also a relatively large group in number compared to other disadvantaged groups, and constitutes a large proportion in other marginalized groups. Hence, improving future opportunities for children and youth in OHC may have an impact on the prevalence of social problems in society, besides the positive effects for the individuals themselves.

One main question in the research field of educational outcomes among children and youth from OHC is whether OHC merely mediates a marginalized social background and, thus, that the high prevalence of poor school performance is primarily due to circumstances that preceded the placement rather than deficits in the care system itself (e.g., Berger, Bruch, Johnson, James, & Rubin, 2009). This relates to the question of potential improvements to the current systems; i.e., the child welfare system, the educational system, and the general welfare system. Upbringing factors that are known to influence children's future opportunities are not cohesive in the OHC population. The family and school situations may change several times during a child's upbringing, when they change foster family or residential care home, or move back and forth between the family of origin and a foster family.

The research on educational stratification in the OHC setting is still limited. Much of the descriptive statistics are lacking; many studies relying on small and local samples, and longitudinal data are scarce (e.g., Wildeman & Waldfogel, 2014; O'Higgins et al., 2017). In this respect, Sweden and the other Nordic countries are well equipped to make a contribution to this research field through our high-quality population data.

Overall aim and outline of the thesis

The aim of the thesis is to add knowledge on educational outcomes and its potential consequences for children and youth from OHC – and to place one of society's most vulnerable groups into the research fields of social stratification and family complexity. Since the OHC population has not yet drawn much attention outside the social work community, an ambition is that an increased awareness of the present situation for this group of children will motivate other researchers, such as the sociological and demographic communities, to contribute to this research field.

The thesis consists of five individual studies and an introduction, which intends to frame the studies in a larger context and summarize the main findings. The two first sections in the introduction present descriptive statistics;

the first on the child welfare system, the OHC population, and the foster family; and the second on educational attainment in recent decades. The life course perspective used in these studies implies that the study subjects were in OHC, and in school, a few decades ago. This raises the question of whether the study results are still valid, or if the situation has changed since then. The long time series in the descriptive section shows that the patterns in the OHC population have been fairly stable (Figures 9–10).

The next section in the introduction gives an overview of the theoretical framework, and of previous research on educational outcomes in the OHC population. It focuses on social stratification and family complexity, situated in the welfare state, and with a life course perspective. The guiding questions are: What are the potential explanations for the high prevalence of poor educational outcomes in the OHC population? Why is this an important issue, both for society and for children and youth in OHC? This section is followed by a method section describing the study design and the national registers used in the individual studies. The introduction ends with a summary and a discussion of the main findings in these studies.

The five individual studies are included as separate chapters after the introduction. They investigate: how the OHC population manages in the educational system compared to peers in the general population and compared to peers with similar socioeconomic background but without OHC experience; how poor school performance relates to future educational attainment and development in young adulthood; cross-country differences in the OHC population's educational patterns in the Nordic countries; and whether foster parents' educational attainment matters for their foster children's educational outcomes.

Out-of-home care in Sweden

In international comparison, the Scandinavian welfare state regimes are considered to be egalitarian with a low level of income inequality. The redistribution of resources is carried out through taxes and transfers, and through publicly funded services (e.g., Esping-Andersen, 1999; 2016; Esping-Andersen & Wagner, 2012; Samuel & Hadjar, 2016; Powell, Yörükcü, & Bargon, 2019). Many services are free (e.g., education), while others have a small flat fee (e.g., health care) or an income-tested fee (e.g., child daycare). When the general systems are insufficient in keeping families above the national poverty line they are supplemented with means-tested social assistance, handled by the social services which belong to the social work profession. This is regarded as a support of last resort, and is only available when all other resources within the household have been exhausted (e.g., Björk Eydal, & Kröger, 2011). Poverty is not a reason per se for OHC in Sweden.

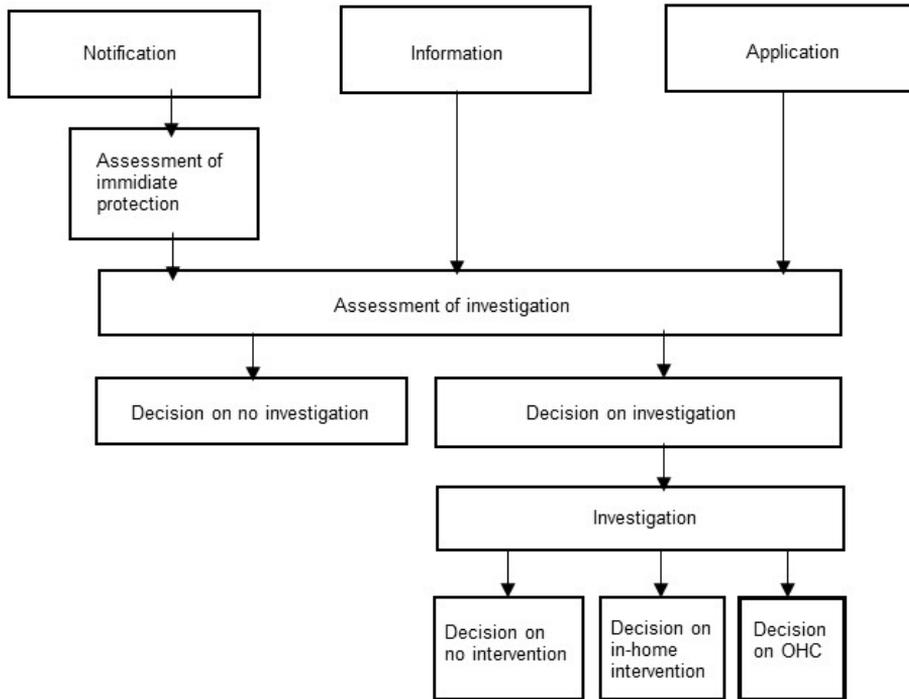
Child welfare is one of the five primary domains of social work, which also includes social assistance, substance misuse treatment, elderly support, and disability support. The first three domains (child welfare, social assistance, and substance misuse treatment) share many features, both legally, organizationally, and professionally. Child welfare is regulated by the Social Services Act (2001:453), but the organizational settings and procedures may vary between municipalities due to their autonomy as well as demographic and socioeconomic differences (Wiklund, 2006a).

The child welfare system

When a child or adolescent (0–17 years) is at risk of impaired health or development due to their home environment or their own disruptive behavior, the child welfare services are to be notified of this. The notification can come from anyone in the child's or adolescent's network – e.g., neighbors, relatives, friends, health care providers, the school, or the police – or the child welfare services can receive information through other sources, e.g. a parallel investigation. Parents, or the children or adolescents themselves, can also apply for an intervention to be carried out (Socialstyrelsen, 2015b). Professionals who have frequent contact with children and adolescents have mandated reporting;

i.e., they are obliged by the Social Services Act (2001:453) to report suspicions of children at risk of impaired health or development due to their domestic conditions. The child welfare system is sometimes described as a ‘funnel’ (Wiklund, 2006a), whereby the top of the funnel represents the input into the system (i.e., the notifications) and the bottom of the funnel the most severe interventions (i.e., OHC, the topic of this thesis).

Figure 1. The assessment and investigation process by the child welfare services regarding children and adolescents at risk.



Source: Adaptation of flowchart in Socialstyrelsen, 2015b (p. 15).

When a notification about a child at risk arrives at the child welfare services, it continues into the funnel through a first assessment (i.e., screening) to determine whether there is a need of immediate protection and custody (Figure 1). If there is such a need, the child or adolescent will be placed in OHC and an investigation will be opened into how this will be continued; i.e., the care plan. If there is no need of immediate protection, there will be a second assessment to determine whether an investigation will be opened. The investigation can result in OHC, an in-home intervention, or no intervention at all. All investigations are to take part in cooperation with the child or youth, depending on their age, and together with the parents. The best interests of the child or youth are to be decisive in the assessment of interventions. The need

of protection and the time until basic needs can be ensured are central in the investigation (Socialstyrelsen, 2013a; 2018a).

Since 1968, all OHC in Sweden is covered by the Child Welfare Intervention Register, CWIR (Socialstyrelsen, 2020a), but due to integrity reasons notifications are not nationally registered (Vårdanalys, 2018). This means that there is no data coverage at the top of the child welfare funnel but only at the bottom, and thus that there are no national data on how often a notification leads to an intervention. Previous rough estimates from local studies suggest that about a third of the children are sorted out at the assessment stage (i.e., no investigation is opened), and that about half of the remaining children are sorted out in the investigation stage (i.e., no intervention is carried out), resulting in approximately a third of the initial referrals leading to an intervention (Wiklund, 2006b). Results from a recent national survey carried out by the National Board of Health and Welfare suggest an increase in notifications to the child welfare services in recent years. In 2018, about 8% of all children (0–17 years) were the subject of at least one referral, two-thirds of them being younger children (0–12 years) and one-third teenagers (13–17 years). About 40% of the notifications came from the police or the schools, and about 17% from dental or health care providers. The reason for notification was most often related to the caregiver (usually the birth parent(s)), in about 39% of the cases to a caregiver's substance misuse or psychiatric disorders, about 20% to violence in the family, and about 8% to 'other' reasons, e.g. housing problems or parental death. In about 33% of the cases, the reason for notification concerned the child's own behavior or problems. A single child can have several notifications of being at risk, from different sources, over time and during an ongoing child welfare investigation. A cautious estimate was that about 38% of all notifications led to an investigation; this estimate was made in relation to notifications and not to individual children (Socialstyrelsen, 2019).

OHC is a measure of last resort in the child welfare system. Other types of interventions are more common and are considered first, and can entail, for instance, structured in-home programs (Wiklund, 2006b). There are no absolute rules regarding when OHC is to be used; every case is assessed individually, and the whole network surrounding the child or youth is taken into consideration. If a less supportive home environment is supplemented by a strong supportive network, and the combination is considered to be good enough, there will not be an OHC intervention. For younger children, the reason for OHC is typically related to deficits in the home environment, e.g. neglect or maltreatment due to parental substance misuse or psychiatric disorders. For adolescents, the reason is typically related to their own disruptive behavior, e.g. delinquency or substance misuse.

Most placements (about 70%) are carried out with the consent of the parent(s) and the child under the Social Services Act, SSA (2001:453), but involuntary placement is legally possible under the Care of Young Persons Act, CYP (1990:52) when this is considered necessary and the child or parent(s)

do not give consent, or for adolescents and young adults when voluntary interventions have been insufficient and compulsory care is needed. Compulsory OHC is ordered by the Administrative Court (Förvaltningsrätten), after application from social services. Placement with consent under the SSA is possible below the age of 18, but may be prolonged until the child graduates from upper secondary education (Socialstyrelsen, 2015b). Involuntary placement due to home environment under the CYPA is possible below age 18, but may be prolonged with consent from the adolescent under SSA. Involuntary placement due to the adolescent's own behavior under the CYPA is possible below age 21 (Socialstyrelsen, 2020c).

Placement in OHC is a major intervention in a child's or youth's life, affects the entire family, and carries a great responsibility from society's perspective as it takes on the parental role (*in loco parentis*). The placement is to be safe and secure, and characterized by continuity (SOSFS 2012:11). The Swedish social welfare system is often described as family service-oriented (Gilbert, Parton, & Skivenes, 2011), aimed at early support and intervention in order to avoid removing the child or youth from their home of origin. But when OHC is necessary, the overriding goal is reunification with the family of origin as soon as possible (Khoo, Hyvönen, & Nygren, 2002; Meagher, Cortis, & Healy, 2009; Heimer, Näsman, & Palme, 2018). The emphasis on reunification is based on a relationship-oriented approach, whose premise is that children develop strong bonds with their birth parents and that maintaining this contact is important for children's identity and well-being (Socialstyrelsen, 2014). A priority task for the child welfare services is therefore to support the contact between children and their birth family during OHC in order to preserve close relations and facilitate reunification (Socialstyrelsen, 2013a).

There are different types of OHC: foster family care and residential care homes. Foster homes are generally smaller in number than residential care homes, but the difference is not absolute. Some foster homes are relatively large in number, if the foster parents have many biological or foster children, while some residential care units are small with only a few children in residence (Upprättelseutredningen, 2011). Placement can be either voluntary or involuntary in both foster homes and residential care homes, with younger children typically placed in foster homes and young adults in residential care homes. Some residential care homes have specific profiles, e.g. specializing in substance misuse or criminal behavior. There are also special residential homes that only provide involuntary OHC under the terms of the Care of Young Persons Act (LVU). These are run by the National Board of Institutional Care, and include secure youth care for adolescents and young adults who have committed serious criminal offences and have been sentenced under the Secure Youth Care Act (LSU), implying that the offense is serious enough for prison but that the offender is too young for imprisonment (Statens insti-

tutionsstyrelse, 2019). This is also one reason for the relatively high proportion of teenagers in the Swedish OHC population; i.e., that young offenders are included in the child welfare system (e.g., Thoburn, 2007).

The responsibility for children or youth in OHC is shared between social services and other authorities such as schools and health care providers, and it should not only be protective in the present but also compensate for previous disadvantages and improve future opportunities for children and adolescents. Since the Swedish welfare system is based on voluntariness and individual responsibility, this demands cooperation between different authorities. In recent years, attention has been drawn to the fact that children in OHC are at risk of missing out on specific parts of the general welfare system, e.g. schooling (Socialstyrelsen, 2013a), somatic health, and dental care (Kling, Vinnerljung, & Hjern, 2016a, 2016b; Kling & Nilsson, 2010). The regulations have therefore been improved and today, when a child or youth is placed in OHC an assessment and implementation plan is to be presented, stating what measures should be carried out and by whom, in order to ensure that the child receives appropriate education and access to health care and dental care according to their needs. While the child is in OHC, the home environment, the relationship with the caregivers, the schooling situation, and access to health care and dental care should be monitored continuously (SOSFS 2012:11).

Unlike the other Nordic countries, and other Western countries, Sweden does not have a specific aftercare program for young adults who leave care to live on their own. There is general legislation in the Social Service Act (2001:453) that states that the child welfare services are to provide support – e.g., in respect to education, employment, and accommodation – when youths in OHC reach majority age at 18 and the voluntary OHC formally ends, if the young adult applies for this; e.g., to stay in the foster family until their upper secondary education is completed. But there is no specific information regarding how long this should last or what the support must or may include (Storø, Sjöblom, & Höjer, 2019; Socialstyrelsen, 2015b; Stein, 2014). However, there is an increased national awareness of the deficits in today’s aftercare situation, and consequently of the need of improved support in the transition to adulthood.

OHC prevalence during the last decades

The prevalence of OHC is usually measured as the proportion of children in care at some time during a given year (as in Figures 2A and 2B), or as the proportion in care at a given date. Experience of OHC is measured as the proportion who have ever been in care at a certain age; e.g., the proportion of 20-year-olds who have ever been in care at some time during their childhood or adolescence (as in Figures 5A and 5B).

The figures included in this section cover foster care and residential care in 1975–2015 among Swedish residents¹. There are a few other types of OHC (e.g., school homes), but these were excluded from the figures for reasons of consistency. This does not change the general picture, though, as these other types of OHC are relatively rare (Figures A1 and A2 in Appendix). The registration of OHC in the Child Welfare Intervention Register (CWIR) started in 1968, and as the CWIR holds individuals born in 1960 and onward teen placements were not registered during its first years.

The OHC prevalence in Sweden is similar to the overall rate in Europe (Figure 2A). For a given year, it is estimated that approximately 1% of European children (app. 1 million children) spend time in alternative care. Many stay in residential care institutions, even among the youngest, but due to the lack of data in many countries, not much is known about their living conditions or later outcomes (Eurochild, 2010). In comparison to the United States, Europe places children in OHC more frequently (Gilbert et al., 2011).

However, it is difficult to make international comparisons of OHC prevalence. OHC is registered and administrated differently across nations, and varied types of OHC are included in the child welfare systems. In Sweden, juveniles are handled within the child welfare system up to age 20 and are hence included in the OHC prevalence, which results in a higher proportion of teens in OHC as compared to countries where the juvenile system is handled outside the OHC system. Conversely, children with disabilities who need to temporarily live outside their home of origin are handled outside the OHC system and are not included in the OHC prevalence (Thoburn, 2007; Eurochild, 2010).

OHC prevalence has been fairly stable among younger children in Sweden since the start of registration in 1968. Below the teenage years, approximately 0.5% in the 0–6 year age group and around 0.7% in the 7–12 year age group spend time in OHC during a given year (Figure 2B). Teenage placements are more common than placements at younger ages, and have also increased in recent decades. This was particularly visible in 1998, due to changes in the Social Services Act (2001:453) when the age limit was extended from 17 to 20 years, and in 2005 due to the increased immigration of unaccompanied asylum seekers. In 2013, unaccompanied asylum seekers (with or without permanent residence) constituted more than half the proportion of teenagers in residential care homes (Socialstyrelsen, 2015a).

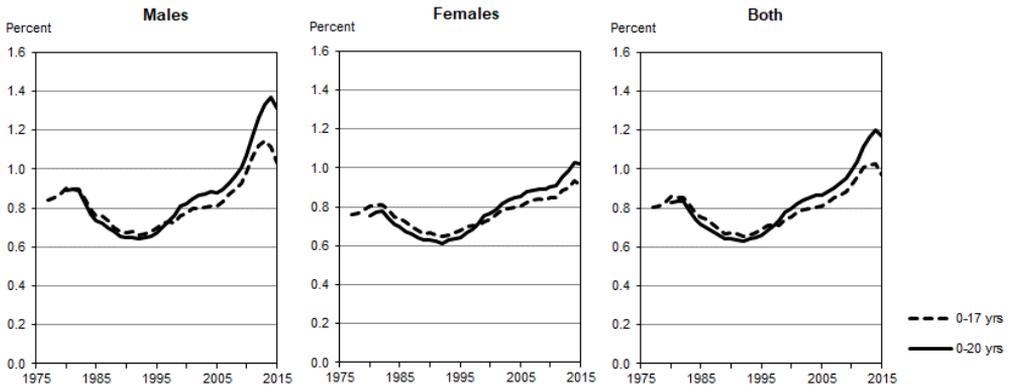
This section covers OHC among Swedish residents for the period 1975–2015. Hence, only unaccompanied asylum seekers with permanent residence are included in the figures. However, unaccompanied asylum seekers were not included in the individual studies in this thesis as the study populations were restricted to individuals who had been exposed to the Swedish educational

¹ Since the denominator in the calculation of proportions consisted of Swedish residents in the total population.

system (i.e., individuals who immigrated after age 7 were excluded in Study I; only domestic-born were included in Studies III and IV; and Study V was restricted to individuals who entered OHC before age 7).

Figure 2A. OHC prevalence by sex

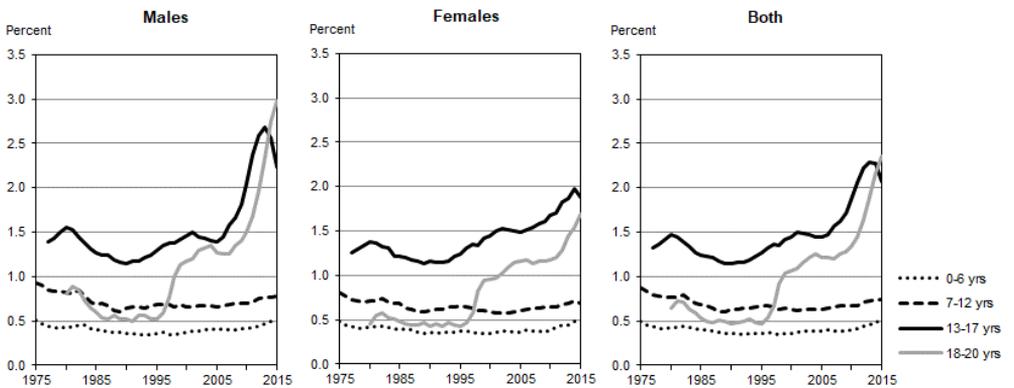
Proportion of children and adolescents in OHC at some time during a given calendar year. Swedish resident by age and sex during the period 1975–2015. Percent.



Source: Child Welfare Intervention Register, National Board of Health and Welfare.

Figure 2B. OHC prevalence by age and sex

Proportion of children and adolescents in OHC at some time during a given calendar year. Swedish resident by age and sex during the period 1975–2015. Percent.



Source: Child Welfare Intervention Register, National Board of Health and Welfare.

The increase in teenage OHC, including unaccompanied asylum seekers with permanent residence, together with an increased population, has caused the

absolute number of individuals who were in OHC at some time during the year to double, from 14,000 in 1990 when the number was at its lowest point to 28,000 in 2014 when it peaked. In 2015, 27,400 (aged 0–20 years) were in OHC at some point during the year, of whom 8,800 had not yet reached their teens and 18,600 were in their teens (Figure A3 in Appendix).

The foster home is the most common type of OHC, especially among younger children. About 15% of those who spent time in foster homes did so in kinship care; i.e., they had a relationship with the foster parents before placement. About 25% spent time in emergency or short-term homes. Placement outside the home municipality (i.e., the social welfare municipality that is responsible for the child) has become more common, with about 50% placed outside the home municipality today (Socialstyrelsen, 2020b). There is no clear distinction between different types of OHC; there is a variety of care homes specializing in different groups of children, e.g. families with small children, or teenagers with certain problems. Most placements are carried out under the Social Services Act (2001:453) with the consent of the parent(s) and the child. In 2015, about a fifth of all placements (ages 0–20 years) were involuntary, under the Care of Young Persons Act (1990:52). Involuntary placement was previously more common, occurring in about a third of cases in 2005–2009, but the proportion has decreased due to the increase in unaccompanied asylum seekers in the OHC population. Involuntary placement is more common among young children. In 2018, 44% of children aged 0–6 years were placed involuntarily. The corresponding rates in the other age groups were 41% among children aged 7–12, 23% among teenagers aged 13–17, and 8% among young adults aged 18–20 (Socialstyrelsen, 2020b).

OHC experience during childhood and adolescence

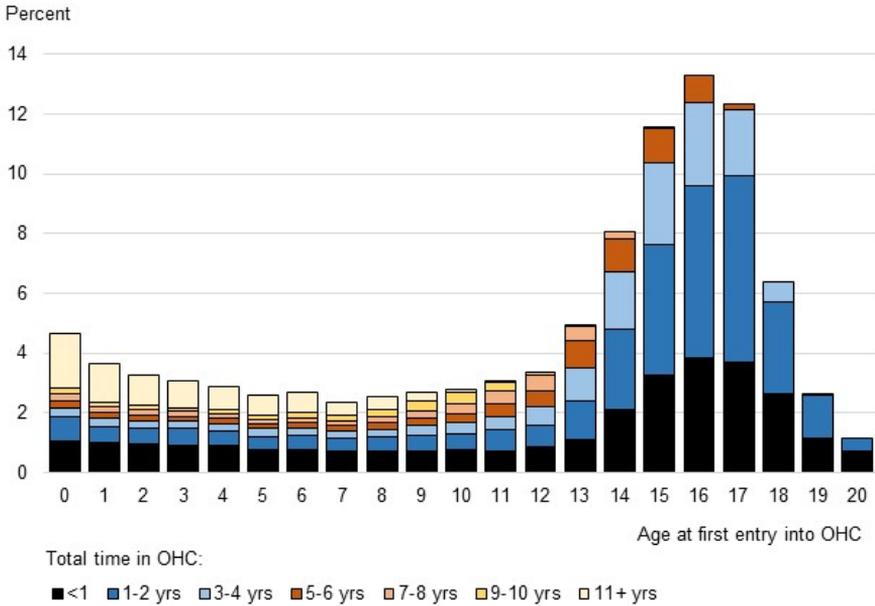
In the individual studies in this thesis, educational outcomes are examined in relation to the individual's care history; i.e., age and total time spent in OHC during their childhood or adolescence. About 5% among younger adult generations have spent time in OHC at some time during their upbringing (Figure 5A). In older generations, the corresponding proportion is approximately 4%. The higher proportion among younger generations is due to the increase in teenage placements and unaccompanied asylum seekers.

The OHC population is heterogeneous in regard to age and time spent in OHC. Figure 3 shows all Swedish residents born in 1980–1994 who spent time in OHC at some time during childhood or their teens, by age at first entry into OHC and total time spent in OHC before age 21 (the stacks in the figure add up to 100%). The most common age at first entry into OHC was 16 years, and close to a third spent less than a year in care. In the total OHC population (born in 1980–1994) about three in ten spent less than a year in OHC, five in ten spent one to four years, one in ten spent five to ten years, and one in ten spent

11 years or more. One in four entered care for the first time before school age (0–6 years), one in six in their early school years (7–12 years), half in their early teens (13–17 years), and one in ten in young adulthood (18–20 years).

Figure 3. Care experience in the OHC population

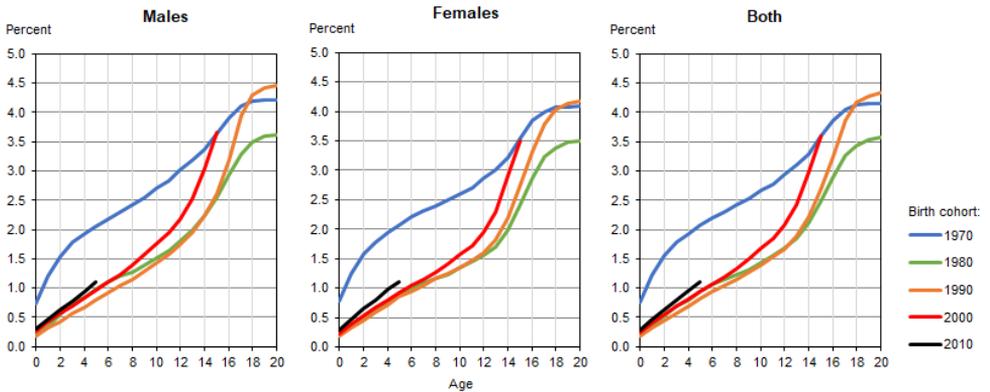
The OHC population born in 1980–1994 by age at first entry into OHC and total time in OHC before age 21. Percent.



Source: Child Welfare Intervention Register, National Board of Health and Welfare.

Figure 4. OHC experience by age

Proportion of the population with experience of OHC at different ages, by sex and birth cohort. Percent.

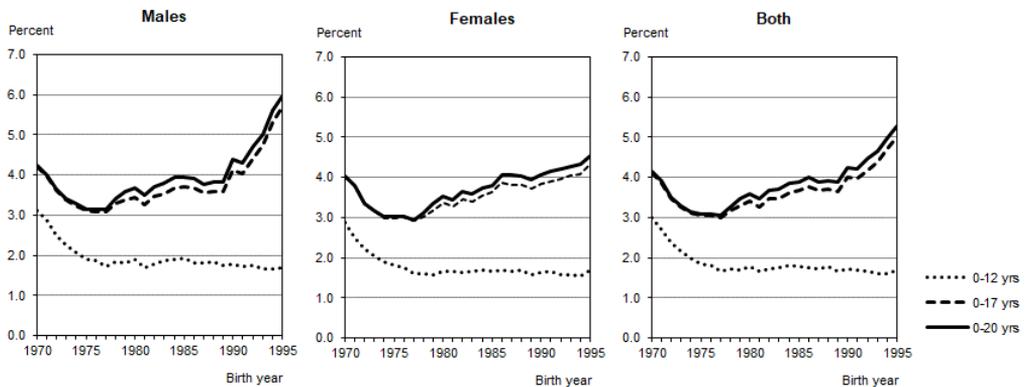


Source: Child Welfare Intervention Register, National Board of Health and Welfare.

In the 1970s, children were a bit younger when they first entered care, but in younger birth cohorts (born in 1980 and later) the age at first entry into care has been fairly stable among those who entered care before their teens (Figure 4). At the start of primary school at age 6–7 about 1% have experienced OHC, and at the start of the teenage years this proportion has increased to 2–2.5%. While OHC experience before the teenage years has remained stable over recent decades, teen OHC has grown rapidly; in younger generations, more than 3% entered OHC for the first time in their teens (Figure 5B).

Figure 5A. OHC experience among 20-year-olds

Proportion of the total population who have ever been in OHC at the end of the year they turn 20 by age at first entry into OHC, sex and birth year. Percent.



Source: Child Welfare Intervention Register, National Board of Health and Welfare.

The heterogeneity of the OHC population is handled in different ways in the individual studies. None of the studies include unaccompanied asylum seekers or individuals who immigrated after primary school started, as the studies aim to investigate how children and youth from OHC fare in the Swedish educational system. Two of the studies only include the Long-term group: Study I care leavers from long-term care; and Study V individuals who have lived in the same foster family for at least five years. In the Nordic comparative studies, the OHC population is divided into sub-groups according to age at first entry and total time in care.

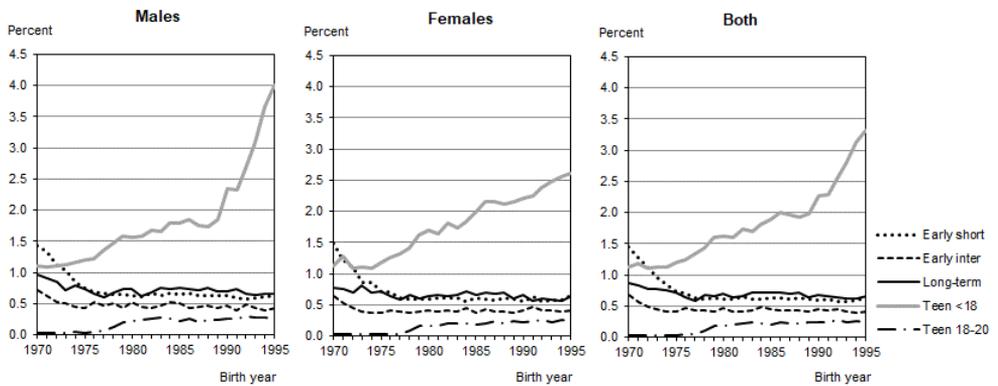
With these restrictions the sub-groups become more homogeneous, e.g. in relation to the reason for OHC. Young children are most often placed in care due to a parent’s behavior, while teenagers are often placed in OHC due to their own behavior. Society’s societal commitment and the child welfare services’ possibilities to intervene in the educational situation also vary in relation to the length of time a child or youth has been in care. Many children from long-term care have been in OHC for their entire primary school period, while those in teen care might have already finished primary school when they enter

care. Or, if they enter residential care at the end of their primary school period, their schooling might be handled at the residential care home. In this descriptive section, the OHC population is divided into mutually exclusive sub-groups according to age at first entry and total time in care, as follows:

- Early short: First entry into OHC before teens and total time in OHC less than one year.
- Early inter: First entry into OHC before teens and total time in OHC one year or more but less than five years.
- Long-term: First entry into OHC before teens and total time in OHC more than five years.
- Teen <18: First entry into OHC at age 13–17 years.
- Teen 18-20: First entry into OHC at age 18–20 years.

Figure 5B. OHC experience sub-groups

Proportion of the total population who have ever been in OHC at the end of the year they turn 20 divided into OHC experience sub-groups, by sex and birth year. Percent.



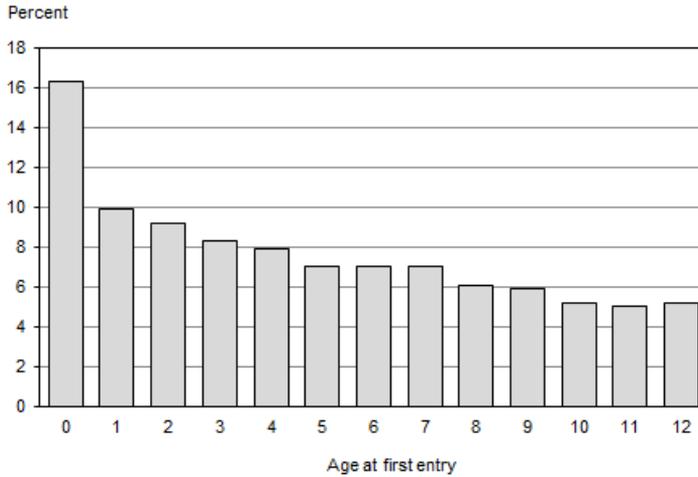
Source: Child Welfare Intervention Register, National Board of Health and Welfare.

The Long-term group

The proportion who have been in long-term care has remained stable, at close to 1%. The majority of children in the Long-term group (according to the definition in this descriptive section, see above), about two in three, were placed in care before primary school started (Figure 6) and about half had spent ten years or longer in OHC (Figure 7). In Studies I and V, the Long-term group was restricted to those who had been placed before primary school started, and the average time spent in care was longer than in the Nordic comparative studies, which follow the OHC sub-groups presented in this descriptive section.

Figure 6. Age at first entry into OHC

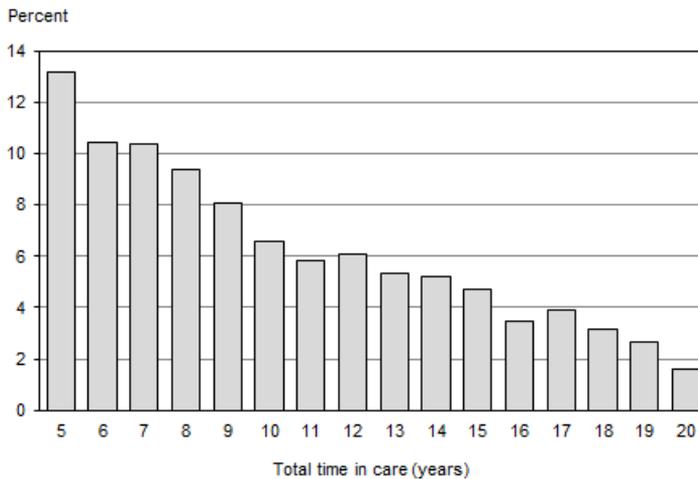
Individuals born in 1990–1995 from long-term care by age at first entry into OHC. Percent.



Source: Child Welfare Intervention Register, National Board of Health and Welfare.

Figure 7. Total time in OHC

Individuals born in 1990–1995 from long-term care by total time in OHC. Percent.



Source: Child Welfare Intervention Register, National Board of Health and Welfare.

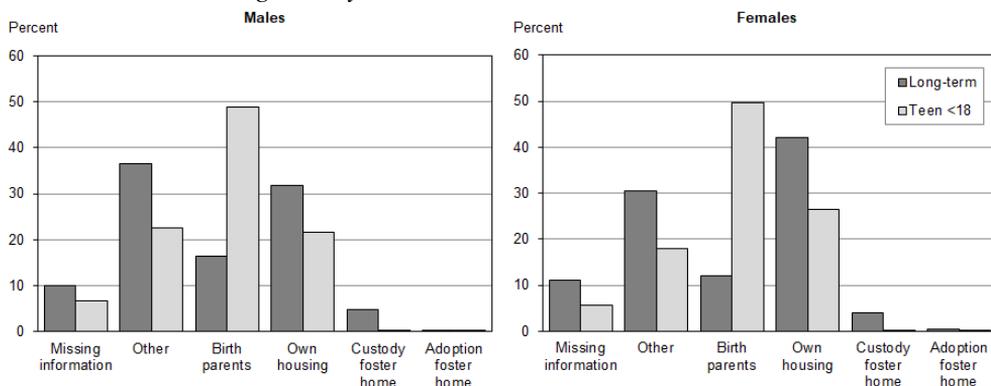
Reunification with birth parents as soon as possible has been an overriding goal in Swedish child welfare since the 1960s, when the family service approach began to prevail. This approach aimed at early support and intervention for families in order to avoid removing children from their home of origin. In

line with this, OHC was perceived as a temporary living arrangement. However, since reunification with birth parents is not always possible, many children remain in long-term care under a regulation that is not fully adapted to their circumstances. On the contrary, it may even contribute to instability and uncertainty for this group of children (e.g., *Utredningen om tvångsvård för barn och unga*, 2015; *Socialstyrelsen*, 2014). As Figure 8 shows, a minority (12–16%) of youth from long-term care move back to live with their birth parents when they exit care, compared to about half of youth from teen care.

In recent decades, some changes have been made to the regulations in order to promote stability for children in long-term care. New regulations state that transferring custody (without adoption) of a child from birth parents to foster parents is to be considered when the child has been in care for three years or longer. In such cases, the foster family receives compensation in the same way as when the child was in regular OHC, but the OHC is terminated. To date, this has rarely been done. Adoption of foster children is also very rare in Sweden, and its potential for giving children in long-term care a more stable life situation has so far only been the subject of a number of investigations (*Socialstyrelsen*, 2014).

Figure 8. Living arrangements after OHC

Individuals born in 1990–1995 from long-term care and teen care (< 18 yrs.) who exited OHC at age 16+ years. Percent.



Source: *Child Welfare Intervention Register, National Board of Health and Welfare.*

The foster family

Most children in care are placed in foster homes, and the social services in each municipality are responsible for recruiting and investigating family homes as well as for providing education and ensuring that children in OHC receive good care. Roughly, foster families are recruited from two different groups: the child’s social network, and families who wish to become foster

families. The motives for the latter group vary; there can be economic motives; a desire for a child of their own; a wish to extend their time as parents when their older children have moved out; altruistic or idealistic motives; or mixed motives, which are hard to classify. Previous research has not been successful in identifying what types of motives are the most common, or whether the motives affect the quality of care. Evidence from previous research, both Swedish and international, suggests that foster families on average have lower socioeconomic status than the general population, more often live in rural areas, and more often are farmers (Vinnerljung, 1996).

There is a lack of descriptive data on foster homes as there is no national register on foster homes. What is known about foster families comes from regional or small-scale studies (e.g., Vinnerljung, 1996; Höjer, 2001). However, in Study V on the intergenerational transmission of education in stable long-term care, information on foster parents was retrieved from censuses (three census years were used: 1980, 1985, and 1990). In this section, census data from 1990, the most recent census year in Sweden, were used to give a description of foster families of children in long-term care born in 1972–1981. These were compared to families of same-aged children in the majority population. Three mutually exclusive family groups were created: regular foster families, i.e. foster families who were not related to the foster child (n=2,603); kinship foster families, i.e. foster families in which the foster parents were aunts, uncles, or grandparents of the foster child (n=908); and majority population families, i.e. without foster children in the family (n=889,760).

The descriptive data from the census somewhat supported this evidence, but the kinship foster families differed more from general population families than the regular foster families did (Table 1). Kinship foster parents were on average older than regular foster parents, more often had one child (the foster child) living in the household, were not working, and lived in a rental apartment. Regular foster parents more often lived in a house of their own in a rural area, as compared to kinship foster parents as well as to biological parents. Birth parents of foster children who lived in kinship care were younger than birth parents of foster children in regular foster care. Regular foster families were larger (average number of children in the household), and kinship foster families smaller, than majority population families.

Foster parents had a lower average education than other parents, but not considerably lower, as has sometimes been suggested as an explanation for poor educational outcomes among foster children. Foster parents in kinship care (who were related to the foster child) had a lower average education than foster parents in regular foster families, but were also older (Table 1). The proportion of missing information was higher among fathers, especially those in kinship foster families (which was the reason for only using maternal education in Study V).

Table 1. Descriptive statistics of families

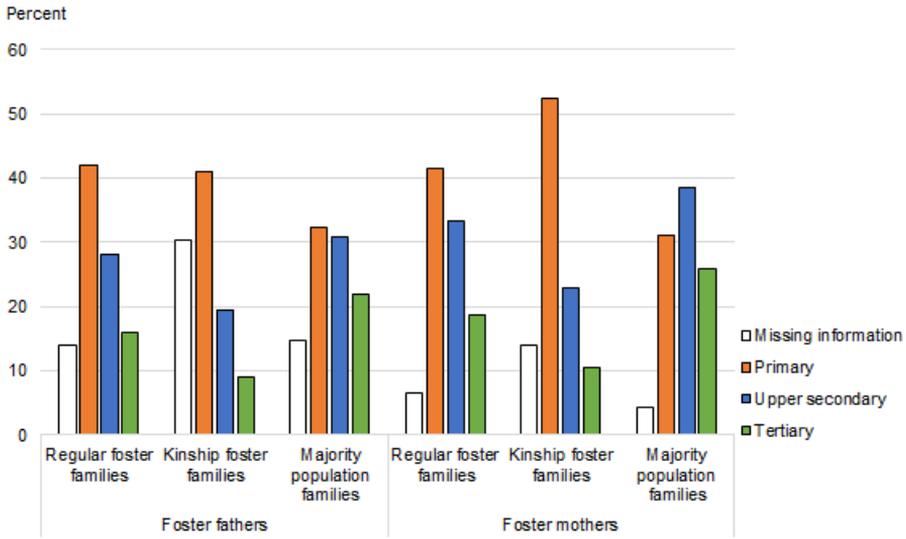
Families with children in long-term care, divided into regular foster families and kinship foster families, and families without foster children (majority population families). Families with at least one child born in 1972–1981 in the census of 1990. Percent.

	<u>Foster families</u>		Majority population families
	Regular	Kinship	
<i>Socioeconomic status (%)</i>			
Not in work force	0.5	8.3	0.9
Manual workers, unskilled	19.2	18.6	13.1
Manual workers, skilled	12.8	13.8	13.6
Non-manual employees, assistant	8.9	11.0	13.9
Non-manual employees, intermediate	20.8	14.1	22.5
Non-manual employees, higher level	9.4	6.9	14.6
Upper-level executives	1.5	1.5	3.8
Self-employed professionals	0.3	0.1	0.3
Self-employed excl. prof. and farmers	7.2	4.1	7.8
Farmers	4.2	1.7	2.5
Unclassified employees	10.5	11.8	2.7
Missing information	4.9	8.2	4.5
Total	100.0	100.0	100.0
<i>Housing (%)</i>			
Own house	81.1	63.8	72.7
Own apartment	3.3	6.7	6.6
Rental apartment	12.8	26.8	18.4
Other	2.3	2.3	1.9
Missing information	0.4	0.4	0.3
Total	100.0	100.0	100.0
<i>Single-parent household (%)</i>	14.6	20.7	15.6
Average age of the older (or only) parent in the household (years)	46.7	52.8	43.6
<i>Number of children in household (%)</i>			
One	18.6	43.3	19.2
Two	28.1	23.9	47.4
Three	25.2	19.2	24.8
Four	16.7	7.9	6.5
Five or more	11.4	5.7	2.1
Total	100.0	100.0	100.0
N	2,603	908	889,760

Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and Population and Housing Census of 1990, Statistics Sweden.

Figure 9. Foster parents' educational level in 1990

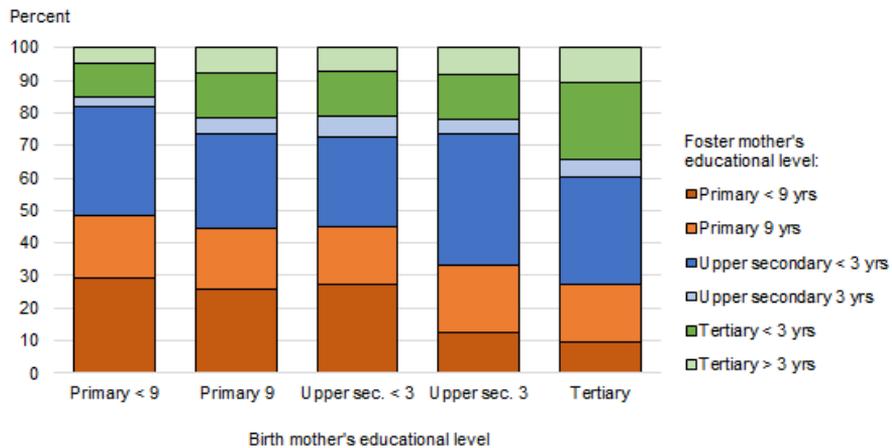
Families with at least one child born in 1972–1981. Children in long-term care, divided into regular foster families and kinship foster families, and families without foster children (majority population families). Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and Housing and Population Register and Multi-Generational Register, Statistics Sweden.

Figure 10. Foster mother's education by birth mother's education

Foster mother's educational level by birth mother's educational level in the census of 1990. Foster children in long-term care in regular foster families; i.e., not in kinship care. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and Housing and Population Register and Multi-Generational Register, Statistics Sweden.

It has been hypothesized that a socioeconomic matching process is involved in the pairing of foster families and foster children, through both social welfare agencies (with or without intent) and the family network. Only regular foster families (not related to the foster child) were included in Figure 10. The figure indicates that there was some sort of matching in the Swedish foster care system, which resulted in foster children whose birth mothers had a higher education being placed in foster families in which the foster mother also had a higher education. In order to control for this matching effect, a combined variable of the birth mother's and the foster mother's educational level was used in Study V on the intergenerational transmission of education in stable long-term care. Without adjusting for the birth mother's educational level, an association between the foster mother's educational level and the foster children's educational outcomes could potentially be an effect of the birth mother's educational level (see Figure 14).

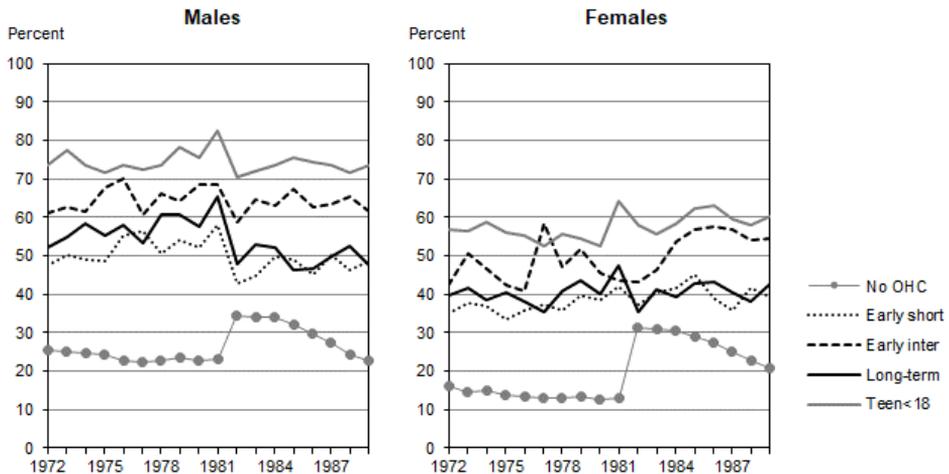
Educational patterns in the OHC population

Poor school performance

The pattern of poor educational outcomes in the OHC population compared to same-aged peers in the general population has remained fairly stable. In the 1972–1989 birth cohorts, the proportion of poor school performance was two to three times higher in the OHC population than in the general population who had never been in care (Figure 11). The Swedish grading system changed in 1994, from a norm-referenced to a criterion-referenced grading system (resulting in a cut in the time series in Figure 11).

Figure 11. Poor school performance in primary school

No or low grades (see the method section) in the last year of primary school, by OHC experience, sex, and birth year. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National School Register, Statistics Sweden and Swedish School Authority.

Results from a recent Swedish study suggest that this change to the grading system had a negative effect on children and youth from OHC, causing them to receive lower grades (measured as grade point average) as compared to their non-OHC peers in both primary and upper secondary school in the criterion-referenced grading system. The negative effect was stronger in upper second-

ary school than in primary school (Klapp, 2019). However, this is not visualized in Figure 11, where the proportions with poor school performance in the OHC sub-groups are compared with same-aged peers without OHC experience. The change to the grading system resulted in a much clearer deterioration (higher proportion with poor grades) in the general population just around the time when the grading system was changed. For males, the relative differences in the proportion of poor school performance between the OHC sub-groups and peers without OHC experience were about the same among the oldest (born at the beginning of the 1970s) and the youngest birth cohorts (born at the end of the 1980s). Among females, the relative differences decreased due to the higher proportion of poor grades in the general population, although the proportion with poor grades remained stable and high in the OHC population. The proportion of poor school performance was two to four times higher in the OHC sub-groups than among non-OHC peers in the oldest birth cohorts, while the proportion was two to three times higher in younger birth cohorts.

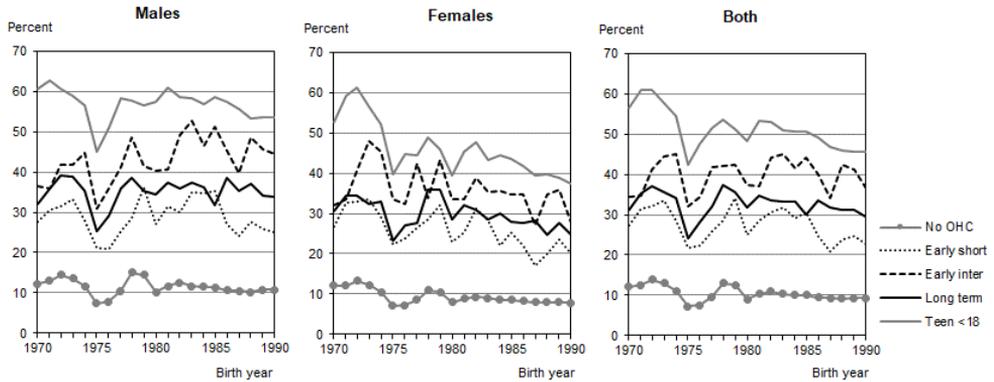
Educational attainment

The proportion of low educational attainment (only primary education at age 25) was two to five times higher in the OHC sub-groups than among their non-OHC peers (Figure 12). The relation between the different OHC sub-groups has been fairly stable, with poor educational outcomes being most common in the Teen care group, followed by the Early intermediate group, the Long-term group, and lastly the Early short group. The relative differences between the OHC sub-groups were slightly greater for low educational attainment than for poor school performance. A small proportion of individuals, 2–6% within the different groups, had missing information on educational level in the registers. If they were included the proportion with low educational attainment would increase slightly, but the patterns would remain similar (Figure A4 in Appendix). In the domestic-born OHC population, mainly among males in the Teen group, the proportion with low educational attainment is slightly higher than in the total OHC population (Figure A5 in Appendix).

In 1991 the upper secondary system changed, with all tracks at this level now lasting three years and preparing students for tertiary education. Enrollment rates at the tertiary level also increased, and the political intention was that at least half of those in every birth cohort was to have enrolled in tertiary education before age 25 (Studiesociala utredningen, 2003). These educational reforms were intended to both equalize educational opportunities between socioeconomic strata and provide the market with better qualified labor (Erikson, 2017).

Figure 12. Only primary education at age 25

Proportion with primary education as the highest completed educational level at age 25 by OHC experience, sex, and birth year. Percent.



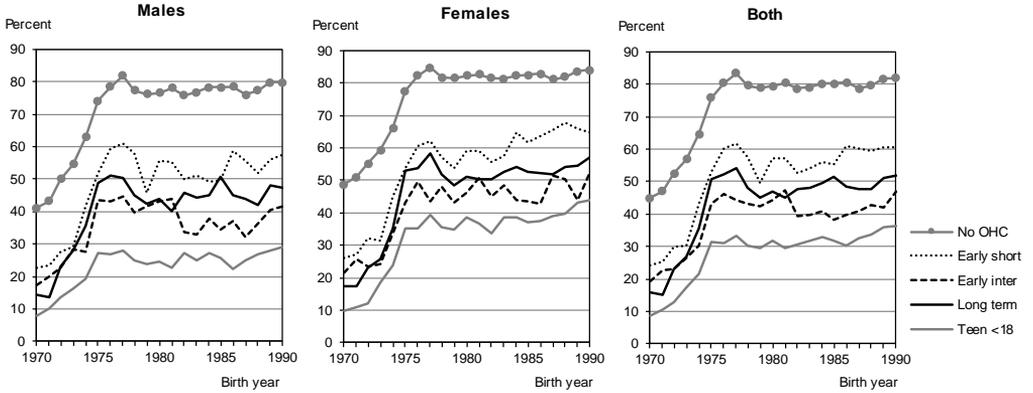
Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

The expansion of upper secondary education in 1991 involved the birth cohorts from 1975 onward. Because of the huge shift in proportions that followed the educational expansion, comparisons are made in absolute instead of relative differences. In the general population, the proportions who had at least three years of upper secondary education at age 25 increased by 37 percentage points between the 1970 and 1990 birth cohorts (Figure 13). The increase was almost as great in the Early short and Long-term groups (36 percentage points), while that in the Early intermediate and Teen groups was lower (28 percentage points). However, the increase rate differed between males and females. All male OHC sub-groups had a lower increase rate than males in the general population, while females in the Early short and Long-term groups had a higher increase rate than females in the general population. However, all OHC sub-groups had substantially lower educational attainment (i.e., proportion with at least an upper secondary education at age 25) than their peers without OHC experience.

The OHC population, especially males, did not benefit from the educational expansion of tertiary education to the same degree as their same-aged peers in the general population. In the general population, the proportions who had a tertiary education at age 25 increased by 13 percentage points between the 1970 and 1990 birth cohorts (Figure 14). The increase was higher among females than among males: 20 and 7 percentage points, respectively. The corresponding increase rates among females and males with OHC experience were lower. Females who were in early short OHC (less than one year of OHC before their teens) had the highest increase rate at 12 percentage points. Still, this rate was lower than among females without OHC experience, and the absolute difference between females in the Early short group and females without OHC

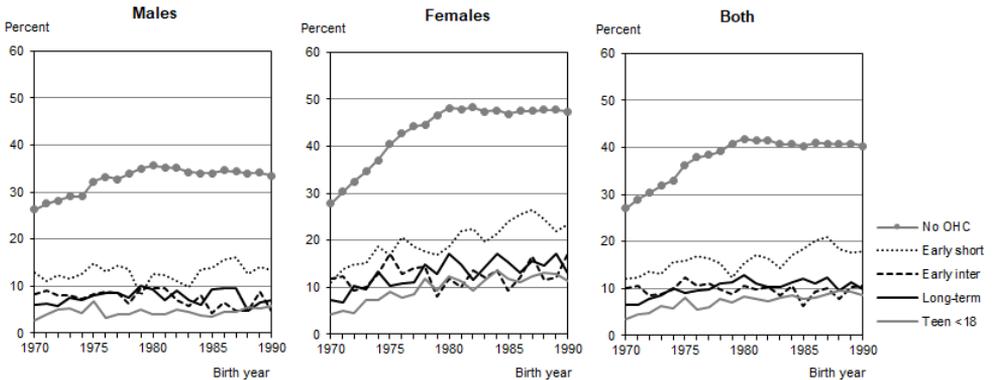
experience increased from 17 to 24 percentage points in the 1970 birth cohort compared to the 1990 birth cohort.

Figure 13. At least three years of upper secondary education at age 25
Proportion with three years of upper secondary education or with tertiary education as the highest completed educational level at age 25 by OHC experience, sex, and birth year. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

Figure 14. Tertiary education at age 25
Proportion with tertiary education as the highest completed educational level at age 25 by OHC experience, sex, and birth year. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

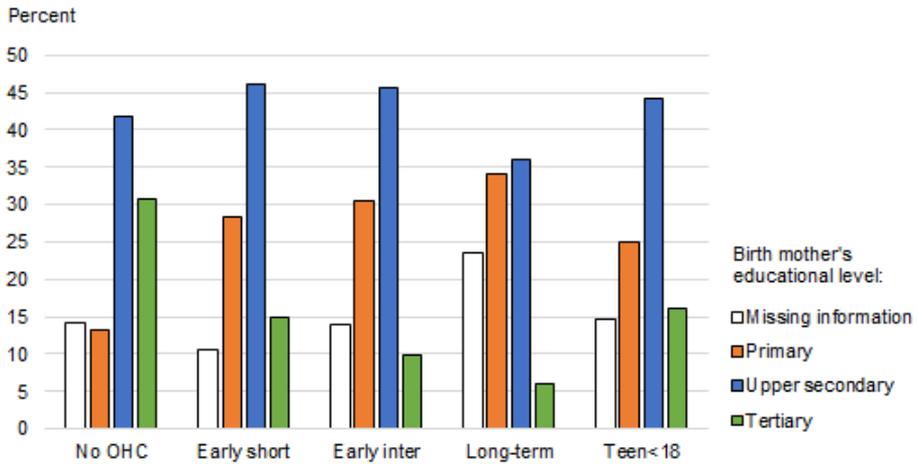
Parental educational attainment

On average, the birth mothers of individuals in the OHC population have a lower educational attainment than birth mothers in the general population,

whose children have never been in OHC (Figure 15). However, in all OHC sub-groups except the Long-term group, a majority have at least an upper secondary education. *Upper secondary education* refers to at least two years at the upper secondary level (as the mothers were in school before the educational reform of 1991 when upper secondary education was extended from two to three years). In the Long-term group a large proportion was missing in the Educational Register, primarily because many of the mothers are deceased (not shown). Parental education is known to be a robust determinant of children’s educational outcomes, which is also the case in the OHC population (Figure 16).

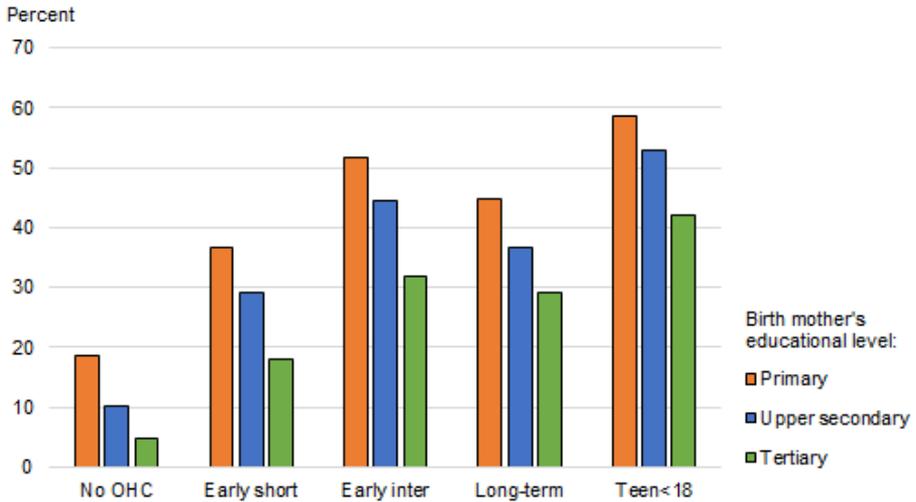
Figure 15. Birth mother’s educational level

Birth mother’s educational level (at age 25 of OHC individual) among OHC individuals born in 1980–1989. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

Figure 16. Only primary education by birth mother's educational level
Proportion with primary education (or missing information) as the highest completed educational level at age 25 among OHC individuals born in 1980–1989 by birth mother's educational level (at age 25 of OHC individual). Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

Theoretical and empirical framework

This section is guided by three questions: (1) What are the potential explanations for the high prevalence of poor educational outcomes among children and youth from OHC? (2) Why are these patterns important, for both society and the individuals in the OHC population? (3) What do we know from general population studies on social mobility and reproduction of educational attainment?

Social stratification concepts

Many concepts and theories in educational research are rooted in the field of social stratification theory, a discipline that focuses on the distribution of resources between and within population groups, and what causes inequality in the distribution of such resources. Stratification systems can be described as having three basic components: the institutional processes that determine which goods are desirable; the rules of allocation that determine how these goods are to be distributed across occupations or positions; and the mobility mechanisms that link individuals to certain occupations or positions. Inequality in the distribution of resources is produced in the matching process, whereby individuals are allocated to positions that hold different ‘reward packages’. From the perspective of society, the matching process ensures that tasks are done in an efficient way to manage a well-functioning society; and from the perspective of individuals, the matching process entitles access to resources that offer opportunities over one’s life course (Grusky & Weisshaar, 2014).

Distribution determinants (stratification systems) are roughly divided into two groups: those at the contextual level and those at the individual level. The three main institutions at the contextual level are the welfare system, the educational system, and the labor market, while the family is the main institution at the individual level. The degree to which families reproduce inequality varies depending on the division of responsibilities between the family and the institutional systems at the contextual level (McLanahan & Percheski, 2008; Cantillon, Collado & Van Mechelen, 2017; Lee & Mason, 2011). Sweden and the other Scandinavian countries are typically classified as universal welfare states of a social-democratic model (Powell et al., 2019), with a high degree

of decommodification and de-familialization; i.e., individuals' dependence on the market and the family for satisfying their needs is low (Saraceno & Keck, 2011). Universal welfare regimes are characterized by more comprehensive risk coverage, generous benefit levels, and egalitarianism, and the use of needs-based assistance is minimized (Esping-Andersen, 1999). As the institutional systems have a relatively strong equalizing effect in Sweden, social inequalities are small in international comparison, although they have increased in recent decades (Eriksson & Jonsson, 1996; Esping-Andersen, 2016).

Stratification mechanisms are found to be stronger in the top and bottom strata of the socioeconomic ladder (Blanden, 2013). As most research on social stratification and inequality nevertheless concerns the general structure, population groups at the two ends of the social spectrum, or specific population groups, often become invisible when general structures are examined. The OHC population is primarily concentrated at the bottom of the socioeconomic ladder (e.g., Vinnerljung & Andreassen, 2015), and their origin families are often dependent on needs-based assistance; i.e., support provided by the social welfare authorities, which the universal welfare states actively try to keep at a minimum (Esping-Andersen, 1999).

In stratification theory, inequality is viewed as multidimensional, with different types of assets being exchangeable and used as 'raw material' in the stratification systems. Economic assets (e.g., income, wealth) entail one type of asset, while other groups include: power (e.g., political or workplace authority), cultural (e.g., knowledge or manner), social (e.g., networks), honorific (e.g., occupational or religious merits), civil (e.g., rights), human (e.g., on-the-job training or general schooling), and physical (e.g., somatic or mental health). Some assets are present at birth, while others are achieved through investments over the life course; and some assets are more easily converted than others. Good manners and social networks are examples of assets in which childhood socialization is important, but they also offer an advantage in the process of achieving other types of assets, e.g. employment. Vocational and academic education, which is achieved in the educational system or at the workplace, is defined as a human asset, while knowledge is defined as a type of cultural asset. Depending on how the stratification systems are organized in different societies, the value of assets varies (Grusky & Weisshaar, 2014). For example, in countries where education is free, economic assets have a lower value in the educational system than in countries where education is costly. However, economic assets can be converted into other assets with a higher value in an open educational system; e.g., school performance by hiring tutors to help children with their homework, or school quality by moving to a certain neighborhood.

Four main parameters are typically of interest in research on inequality: (1) the amount of inequality, (2) the rigidity in the inequality, (3) the degree to which traits ascribed at birth determine inequality, and (4) the degree to which

inequality coheres (crystallizes) (Grusky & Weisshaar, 2014). All these parameters are relevant in studies on educational outcomes among children and youth from OHC.

Education – a main factor for social stratification

So why is education such an important factor for the distribution of resources within societies? The short answer is: Because it is crucial for entrance onto the labor market and for future occupational achievements, and hence provides means for self-sufficiency and future life opportunities. The importance of education as a determinant of future opportunities has continuously increased in Sweden since the 1950s as a result of the shift from an agricultural economy, in which land was the important asset, towards an advanced industrial and post-industrial economy in which skills achieved in the educational system are regarded as the principal asset in the socioeconomic stratification process (Grusky & Weisshaar, 2014). An effect of this shift was that meritocratic selection became more decisive on the labor market, which may promote social equality if education is accessible for individuals regardless of their social background. This is why an open educational system can be a powerful tool for stimulating social mobility (European Commission, 2010).

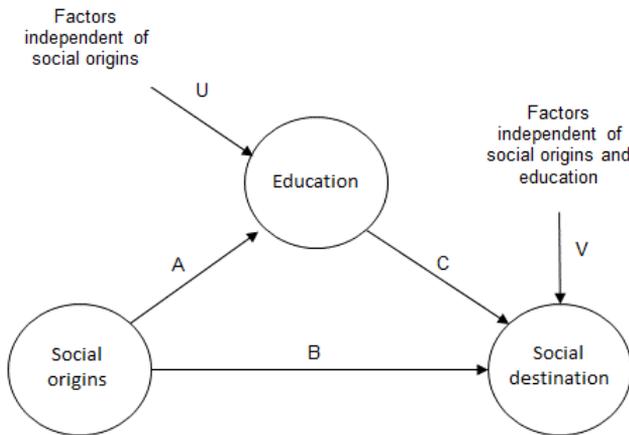
A vast body of international research on social stratification and social mobility over the last 50 years has led to a number of empirical generalizations. One is that “Social mobility exhibits a common pattern but varies in strengths across nations and over time” (Hout & DiPrete, 2006, p. 3), and another is that “Education is the main factor in both upward mobility and the reproduction of status from generation to generation” (Hout & DiPrete, 2006, p. 6). These generalizations do indeed appear to be valid for the OHC population. International research shows a similar pattern, across countries and time, of young people from OHC being disadvantaged in the educational system (e.g., Gypen et al., 2017; Trout, Hagaman, Casey, Reid, & Epstein, 2008), and education being a key factor for the OHC population’s future opportunities (e.g., Vinnerljung et al., 2010; Forsman, Brännström, Vinnerljung, & Hjern, 2016). However, cross-country OHC comparisons are rare (cf. Cameron et al., 2018), and the variation in the strength of mobility patterns between countries is yet unsettled.

The second statement may be perceived as contradictory, if one assumes that education can only hold one mechanism – either promoting upward social mobility or promoting the reproduction of social status. This was also argued in the early days of educational inequality research, which has today shifted towards Blau-Duncan’s status attainment model (Figure 17). This model illustrates that, due to the central role of education on today’s labor market, education can promote social mobility if factors independent of social origin have an impact on educational achievement (U). In the case of children and

youth from OHC, such factors might be educational support while in care, or later in the pathway, with after-care support when young people exit care (V). There is plenty of evidence that education is a strong mediator of socioeconomic status in the parent-child link; i.e., that the association is strong both between social origins and education (A) and between education and social destination (C). But upward social mobility can also be promoted in the educational system as long as there is an independent association between education and social destination. The educational system has a stronger stratifying impact in Sweden than in many other Western countries as the influence of social origins, on continuing in education, is mediated by school performance (Jackson, 2013, 2014; Rudolphi, 2013) and the association between education and social destination (C) is strong (Breen, 2010).

Figure 17. The status attainment model

A simplified illustration of Blau-Duncan’s status attainment model.



A = the variation in education that comes from social origins. B = the variation in social destination that comes from social origins. C = the variation in social destination that comes from education. U = the variation in education that comes from factors independent of social origins. V = the variation in social destination that comes from factors independent of education and social origins.

Source: Adaptation of illustration in Hout & DiPrete, 2006.

Legalizing socioeconomic differences

Social stratification theory distinguishes between the distribution of resources (or assets; e.g., economic, social, human, physical) and the distribution of opportunities to achieve these resources, whereby the latter is crucial in defining an open and ‘fair society’ (Breen & Jonsson, 2005; Grusky & Weisshaar, 2014). However, it is debated whether the latter is possible to achieve without the former (Esping-Andersen, 2015).

The impression of fairness is also what makes the educational system such a powerful stratification system, as in the universal welfare regimes where education is perceived to be acquired in fair competition since it is free. Some scholars claim that educational attainment has become a way of justifying inequality, and that low educational attainment today is more stigmatizing than poverty was in the past, as it is perceived as an independent measure of individuals' ability. Therefore, it is potentially more influential to the self-identity (Alon, 2014) especially in state educational system where education is free (Mills & Gales, 2010). Bourdieu's theories on the reproduction of social and cultural inequalities especially emphasize this feature; that the educational system reproduces power and privilege within the privileged classes in a concealed way, which allows its members to view their success as a result of superior ability (Bourdieu & Passeron, 1990).

The fairness of the educational system relates to what causes the high prevalence of poor educational outcomes in the OHC population; i.e., if adverse childhood experiences or factors within the institutional systems are the prevailing determinant of low educational attainment. It is clear that the group is generally disadvantaged when it comes to the availability of resources in their home of origin. In this respect, this group may even be regarded as one of society's most vulnerable (e.g., Vinnerljung & Franzén, 2006; Vinnerljung, 1996). In order to provide children and youth from OHC with 'fair' opportunities, two prerequisites must be met: (1) factors that are independent of social origins (U in Figure 17) must compensate, at least to some degree, for weak resources in the home of origin; and (2) the independent association between education and social destination (C in Figure 17) must be strong.

The educational system

The educational system has been actively used in Sweden as a tool for decreasing social inequality. Sweden is also one of few countries where educational inequality has decreased during the educational expansion (Breen & Jonsson, 2007). In most other advanced industrial countries, the educational expansion has primarily been driven by cohort effects; i.e., by an increase in educational attainment among younger cohorts as compared to older cohorts (Grusky & Weisshaar, 2014; Erikson & Goldthorpe, 2014; Breen, 2014; Breen, 2010). However, gender inequality has declined sharply in all economically advanced countries and even reversed in many countries (Breen & Goldthorpe, 2014). Today, boys generally have lower educational outcomes than girls, in both the OHC population (e.g., O'Higgins et al., 2017), and the majority population (e.g., OECD, 2018). The decrease in educational inequality between social groups in Sweden was primarily an effect of the expansion of primary and upper secondary education half a century ago. In later decades,

when tertiary education was expanded, the development stalled due to a saturation in the socioeconomic upper stratum, and muted mechanisms in the bottom stratum. In recent years, there has even been a tendency of increased educational inequality (Breen & Jonsson, 2007) and increased educational differentials (OECD, 2018).

An open educational system

Individuals' educational decisions are often discussed from the perspective of the rational choice model, whereby proceeding to higher educational levels is dependent on the cost of remaining in education, the (perceived) likelihood of success in continued education, and the (perceived) value of further education (Breen & Goldthorpe, 2014). Three features have been identified as especially important for an open educational system and equal educational opportunities: (1) the degree and timing of tracking (at what age educational choices are made) (Breen & Jonsson, 2005; Brunello & Checchi, 2007; Triventi, Panichella, Ballarino, Barone, & Bernardi, 2016); (2) the cost of education (Beller & Hout, 2006; Birkelund, 2006); and (3) the overall enrollment rates (Breen, 2010; Breen & Jonsson, 2005).

According to these features, Sweden has an open educational system where the degree of inequality in educational opportunities is low from an international perspective (e.g., Jackson, 2014). Education is publicly funded and free at all educational levels. Primary school stretches over ten years (nine years when the study population went to school) and is compulsory from age 6 to age 15–16, while education at higher levels is voluntary. Parents are responsible for economically supporting their children until they complete upper secondary education, though only until they turn 21 years of age (Socialstyrelsen, 2013a). When children reach majority age, the child benefit is replaced with a study benefit until completion of upper secondary school. At the tertiary level, the study benefit is supplemented by study loans at a low interest rate. Students start repaying their loans when they are employed, and payment amounts are set in relation to their yearly income. Admittance to higher education is centralized by governmental authorities, and relies on previous educational achievement. Enrollment rates are high. Most students (98–99%) continue to upper secondary education, to either academic or vocational tracks, and the completion rate is over 80% at age 21 and close to 90% at age 31. About half of all students in younger birth cohorts proceed to the tertiary level (Bäckman, Jakobsen, Lorentzen, Österbacka, & Dahl, 2015; Albæk et al., 2015; OECD, 2019).

Tracking – managing students' heterogeneity

The educational system can be said to have two contradictory goals: it should both stratify students into different positions in society, and simultaneously

promote social integration. Tracking is a way of managing students' academic heterogeneity (Dupriez, Dumay, & Vause, 2008) and linking the educational system to the labor market (Bäckman et al., 2015). It is argued that a high level of tracking increases graduates' labor market relevance, but inequality in educational opportunities tends to increase and the association between socioeconomic background and academic achievement becomes stronger. Evidence shows that the overall academic performance in the population becomes higher when the degree of tracking is low, as a larger proportion of students reach higher academic levels without being sorted out at an early age. However, results from a comparative study of the OECD countries suggest that different tracking systems do not have significant impact on the academic performance of the lowest achievers (Dupriez et al., 2008).

Sweden has a low level of tracking. There are no decisive choices at the compulsory level that affect entry into upper secondary school. Everyone has the right to start an upper secondary education; even without having graduated from compulsory school, through the addition of an extra year at the beginning of upper secondary school to make up for the missed courses. However, admittance to upper secondary education was somewhat restricted in 2011 due to requirements regarding the completion of basic primary level courses, which seems to have had a negative impact on the OHC population's enrollment in upper secondary education (Socialstyrelsen, 2016).

All tracks in upper secondary school, even the vocational ones, give access to the tertiary level. Different tracks at the tertiary level do have different qualification requirements upon completion of specific upper secondary courses, e.g. mathematics at a certain level, but these can be supplemented by admission to the adult education system, which is accessible to all ages. The adult educational system also offers opportunities to improve previously failing grades (Bäckman et al., 2015; Albæk et al., 2015).

The family institution

It is well known that family factors are important for children's future opportunities, but little is known about the influence of foster family factors on foster children. The OHC population is rarely included in studies on family complexity, which typically refer to children living in different family compositions over time due to changes in their parents' partnership behavior (e.g., Chambers, 2012; Carlson & Meyer, 2014; Thomson, 2014). Still, many children and youth from OHC have indeed experienced different family compositions during their upbringing, both in their home of origin and while in care.

Reproduction of inequality

The family is regarded as the key institution for social stratification at the individual level as it is the main organizer of assets among individuals, e.g. instrumental, emotional, or financial. The degree to which families reproduce inequality in societies is dependent on the division of responsibilities between the family, the market, and the welfare state (e.g., Esping-Anderson, 1999; 2016). As with education, the educational system can reduce social inequality if factors independent of social origin have an impact on educational achievement. The Scandinavian welfare states promote gender equality, and one cornerstone has been universal daycare for younger children in order to enable their parents to engage in work outside the home (Saraceno & Keck, 2011; Chambers, 2012). The universal daycare system has also promoted social equality. In the Scandinavian countries, where the vast majority of pre-school children participate in high-quality daycare, differences in pre-school abilities are found to be smaller than in other countries, and the beneficial effect of daycare on later academic achievement to be stronger among children whose parents have lower educational levels (Esping-Anderson, 2016). However, participation in daycare varies among children from different socioeconomic backgrounds, and children in lower socioeconomic strata, e.g. those whose parents are unemployed, have a lower participation rate than children in higher social strata (Skolverket, 2018).

From a vast body of research it is well established that parental social status is one of the strongest and most robust predictors of children's school performance and future educational attainment; i.e., that children from advantaged social backgrounds perform better in school and achieve higher levels of educational attainment in adulthood than children from less advantaged social backgrounds (Breen & Goldthorpe, 2014; Breen & Jonsson, 2005; Hertz et al., 2007; Reardon, 2011). The correlation between parents' social position and their children's social destination is especially strong at the bottom and the top of the social spectrum (Blanden, 2013; Karlson & Holm, 2011; Esping-Andersen, 2012; Sirniö, 2016), as different dimensions of social status, e.g. income, education, wealth, and professional position, overlap and enforce each other (Hällsten & Thaning, 2018). Educational homogamy (that partners have similar educational levels) is also known to be strong in most countries (Kalmijn, 1998), which further enhances the intergenerational transmission of education. Findings from a Danish study suggest that wealthy families invest a great amount of time in socializing and building networks that empower their children in school, in relation to both classmates and teachers (Bach, 2014). Instability in placements, and thus in the home environment, will potentially impair these time-consuming processes. In addition, children in care may need more support in their schoolwork than other children. These resources may not be available in the foster or residential care home.

The transmission of educational opportunities from parents to children involves multiple factors that are intertwined and difficult to disentangle, e.g., genetics, personality traits, academic home environment, educational aspirations, living areas, and school quality. Researchers in several fields have tried to disentangle these factors, and there are many different conceptualizations of the processes and mechanisms that contribute to the strong association between social origins and educational outcomes. Central to many theories is a separation of differences determined by ‘ascribed’ and ‘achieved’ characteristics, whereby a strong influence of ‘achieved’ characteristics is a sign of more equal opportunities (e.g., Gregg, Jonsson, Macmillan, & Mood, 2017). However, these theories are not easily converted into measurable model specifications and variables. The studies in this thesis are dependent on national register data and are consequently limited by variables covered by these registers, e.g. grades and educational level.

One distinction between ‘ascription’ and ‘achievement’ (which relates to grades and educational level) is whether educational inequalities are the result of differences in educational ability (performance) or of differences in educational decisions regardless of educational performance (choices), or a combination of the two. In line with this, the intergenerational transmission of educational attainment has been decomposed into one part determined by differences in performance (the primary effect) and one part determined by choices (the secondary effect) (Boudon, 1974; Erikson & Rudolphi, 2010; Jackson, 2013). Generally, a low intergenerational transmission effect indicates a low level of educational inequality, as individuals’ educational opportunities are not highly dependent on parental education. Transmission determined by differences in performance (the primary effect) is found to be fairly stable between countries and over time, while transmission determined by differences in choices (the secondary effect) varies to a higher degree and is relatively low in the Nordic countries in international comparison (Erikson & Jonsson, 1996; Jackson, 2014).

The concept of social origins also distinguishes between nature (i.e., genetics, heritability) and nurture (i.e., social ascription, environmentality) (e.g., Nielsen, 2006; 2018), which relates to the case of children growing up with someone other than their birth parents. While children in care have rarely been studied in these fields of research, there are some studies on the intergenerational transmission of educational attainment among adoptees that may be seen as a parallel to the foster care setting, as it involves other caregivers than birth parents. When adoption involves infants, the influence of the birth parents is argued to capture broad pre-birth factors, including genes and prenatal environment, while the effect from adoptive parents captures broad post-birth factors, such as upbringing environment. Previous studies suggest that the transmission effect from adoptive parents is lower than that from birth parents, with approximately a third (Björklund, Lindahl, & Plug, 2006) to a fourth (Sacerdote, 2004) of the transmission effect in the mother–child link among

non-adoptive peers. It has been argued that the assignment of children to adoptive families is not always random, and that some adoption studies are influenced by a positive correlation between the characteristics of birth and adoptive parents (Björklund, Jäntti, & Solon, 2007). This might explain the lower transmission effect in the study by Sacerdote, which involved randomly assigned Korean-American adoptees, as compared to the study by Björklund and colleagues, which involved domestic adoption in Sweden. The joint impact of birth parents and adoptive parents was similar to the single impact of birth parents among non-adoptive peers, indicating that the adoption per se had a negligible effect for adoptees' educational outcomes (Björklund, Lindahl, & Plug, 2006).

Changes in family patterns

Increasing divorce/separation rates have been one key component in the change in family patterns in recent decades towards more dynamic and varied family constellations in which single parents and re-cohabitating couples have become more common (e.g., Härkönen, 2014; Chambers, 2012). Even though these changes might not have influenced the prevalence of OHC per se, as the reason for OHC relates to factors associated with marginalization, it might still have influenced children's living arrangements while they were in care: Firstly, it might have contributed to difficulties in recruiting foster families – which is indeed difficult today (Socialstyrelsen, 2016). It is a great responsibility to include an additional child in one's family, especially since foster children's pre-care experiences may require additional support (Schuengel, Oosterman, & Sterkenburg, 2009; Pears, Kim, & Brown, 2018; Heckman, 2014). A higher proportion of single-parent households and re-cohabitating families in the population, together with the dual-earner family model (Saraceno & Keck, 2011; Chambers, 2012), may have made it more difficult to recruit foster families than it was a couple of decades ago. Secondly, parental separations may also affect foster children while in care and cause instability in placements. Results from a Swedish study suggest that foster parents' divorce is a cause of disruption in placements (Socialstyrelsen, 2012; Vinnerljung, Sallnäs, & Berlin, 2014).

Although data on OHC prior to 1968 are lacking, other sources indicate that foster care was more common in historic times due to a higher prevalence of poverty and premature mortality (Sköld, 2012; Vinnerljung, 1996; Vanvårdsutredningen, 2011). When adults were asked in the 1980s if they had lived with both their birth parents for their entire childhood, only 69% of those born in 1900–1909 answered that they had, compared to 82% among those born in 1950–1959 (Table A1 in Appendix), at the peak of the nuclear family model when parental separation was low and material standards had begun improving (e.g., Cherlin, 2012). At the beginning of the 1900s, parental death was the most common reason for not living with both birth parents. Over time

parental separation became more common, while other reasons like parental illness or unsatisfactory social conditions remained fairly stable through generations. Among individuals born in 1900–1969, the proportion who had lived with foster parents for most of their childhood varied between 1 and 2% (Statistics Sweden, 1992). Among the oldest cohorts, however, due to premature mortality in the OHC population (Manninen Pankakoski, Gissler, & Suvisaari, 2015; Almquist et al., 2018) there might be a selection bias that results in an underestimation.

The family distributes resources in several dimensions

The family distributes resources in several dimensions (e.g., Barclay, Lyngstad, & Conley, 2018); i.e., both within and between families and generations (Figure 18). Some families have more resources than others, which results in differences *between* families at present (e.g., income inequality) and for future generations (e.g., intergenerational transmission of educational opportunities). Furthermore, families also distribute resources *within* the family (e.g., between spouses) and between generations (e.g., parents’ interaction with children of different ages or with stepchildren compared to biological children). Factors associated with the reason for OHC, e.g. parental social problems, and with the discontinuity in the family setting may cause the OHC population to come out disadvantaged in these processes – even though the welfare systems even out some of the differences between and within families (McLanahan & Percheski, 2008; Cantillon et al., 2017; Lee & Mason, 2011; Esping-Anderson, 2016; Erikson & Jonsson, 1996).

Figure 18. *Different dimensions of inequality in regard to the family*

	Between families	Within families
Within generations	A) E.g. income inequality	C) E.g. houseworks
Between generations	B) E.g. transmission of educational opportunities	D) E.g. sibling differences

Theories on how parental separations affect children’s well-being and future opportunities, e.g. educational attainment, share many of the perspectives from studies on children in care. Four theoretical perspectives (mainly involving inequality between different types of families; see Sections A and B in Figure 18) have been particularly influential in research on parental separation (Gähler, 1998): (1) The crisis perspective focuses on the acute stress caused by the dissolution of the family, and the separation from the parent with whom the child will no longer live on a daily basis. This is also valid for children in care, with the difference that children in OHC live with neither of their birth

parents when they have been placed in care. (2) The economic deprivation perspective focuses on the loss of material resources when parents change from sharing the costs of one household to each of them maintaining a household of their own. In contrast to parental separation, foster children are likely to move to a family with a better economic standard than in their home of origin as foster families have been approved by the child welfare services, which consider their material standard. (3) The family structure perspective focuses on changes in the parent-child relationship when one parent leaves the family, which leads to less time with the child, while the other parent may be left with a greater share of the responsibilities, which potentially decreases their attention to the child. In the foster family setting, the family structure is usually more complex and involves relationships between birth parents, foster parents, and the child welfare services. (4) The inter-parental conflict perspective focuses on conflicts between parents after divorce, which might be more influential to children's well-being than the separation itself. Conflicts in the surroundings of children in care are a prevailing problem in many OHC cases, and may have strong influence on the children's well-being.

Studies on family patterns also involve dimensions of the distribution within families (Sections C and D in Figure 18). A less continuous history in the family is found to weaken the emotional bonds between family members (Amato, 2005). Evidence from American studies on the intergenerational exchange of resources (e.g., instrumental, emotional, and financial) shows that there is a strong degree of reciprocity, either explicit (i.e., solidarity) or implicit (i.e., emotional attachment), in the assistance between generations. But that family dissolution is associated with a lower degree of intergenerational exchange, and that the normative responsibility is greater towards kin than step-kin (Ganong & Coleman, 2006; Lee & Mason, 2011), which may apply to foster children as well. It is also argued that families in post-industrial societies are based on emotional bonds ('pure relationships') rather than on the production of necessary goods, as in pre-industrial societies (Chambers, 2012). But it is hard to say how this change has affected foster children's overall situation within foster families. Both in Sweden and internationally, older generations of foster children have testified that they were used as labor and treated very poorly (Vanvårdsutredningen, 2011; Sköld, 2012).

Furthermore, foster families differ from other family constructions, e.g. re-cohabiting families, as the foster family is usually a non-permanent setting. As mentioned, the intention is typically for the child to reunify with his or her birth parents. While the child is in OHC, the foster family is to facilitate a continued relationship between the child and his or her birth parents – as well as maintain contact with the child welfare services. This construction is sometimes referred to as 'three-headed parenting', with the parties sharing the responsibility and mandate in decisions concerning the child (Utredningen om tvångsvård för barn och unga, 2015). This could potentially make it hard to balance between the two childhood dimensions of 'being' and 'becoming';

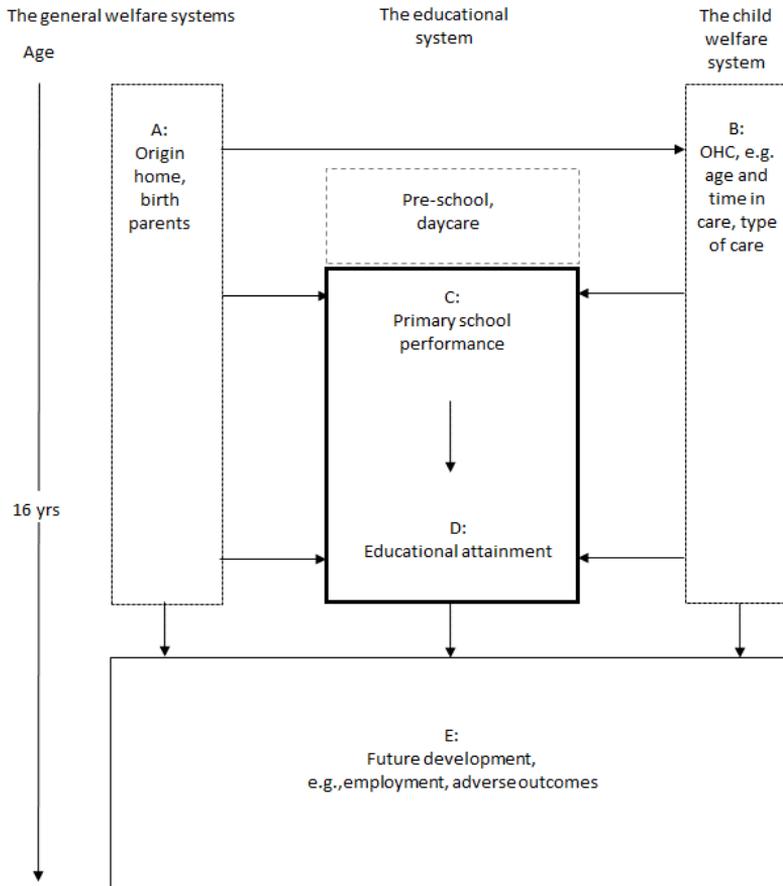
i.e., well-being during childhood and development towards adulthood taking priority over schoolwork, for instance (cf. Ben-Arieh & Frønes, 2011).

The relationships and commitment between the parties depend on many different factors such as the child's age, the time spent in the family, the reason for OHC, the geographical distance, the support from child welfare services, etc (e.g., Toguchi Swartz, 2004). McClung & Gayle (2013) identified trust between individuals in the OHC setting as a key component affecting the degree of transmission of resources within the foster family. That the commitment may be weaker in the foster family setting is also supported by a Swedish study on interruptions in OHC, which showed that parental divorce in foster families sometimes led to neither of the foster parents wanting to continue caring for the foster child, even in cases in which the child had spent many years in the foster family. Biological children in the foster family was also a risk factor for disruption in placements, e.g. because the foster parents felt that their own biological children needed additional support or attention (Socialstyrelsen, 2012; Vinnerljung, Sallnäs, & Berlin, 2014).

A life course perspective

The individual studies in this thesis take a life course perspective and examine social stratification in relation to OHC and the educational system. The life course design can be illustrated by a simplified graph (Figure 19). In the OHC setting, the influence of family and upbringing factors is represented by both A and B, where A represents the home of origin (e.g., parental socioeconomic status, parental substance misuse), and B represents the OHC experience (e.g., age at first entry into OHC, total time in OHC, foster family characteristics). The OHC population is distinguished from other groups of children and youth by the influence of B, where pre-care factors in A led to B and to discontinuity in A (change in home environment during upbringing years). The educational system is represented by C and D, where C represents school performance in primary school, and D represents highest completed educational attainment level at different ages. In the Swedish context, most children attend pre-school from an early age. Evidence show that this has an equalizing effect on the educational stratification process (Esping-Andersen, 2016), but none of the individual studies in this thesis include pre-school factors due to the lack of such national register data. Future development is represented by F, with varying outcomes in the different individual studies (psychosocial problems in Study I, mortality in Study II, and NEET in Study IV).

Figure 19. Social stratification by education in OHC context.



Cumulative (dis)advantages

The risk of adverse developments is often an accumulative process whereby different risk factors are linked to each other and add to a process of negative development (Ferraro, Schafer, and Wilkinson, 2016). The central idea in cumulative advantage theory (CA) is that a (dis)advantage of a key resource in the stratification process grows over time and leads to increasing inequality. Another way of describing the accumulation of (dis)advantages over time is through Bourdieu’s capital theory, in which he emphasizes early formation (childhood) at the individual level and the educational system at the institutional level (Bourdieu, 1990). As CA magnifies differences over time, individuals or groups that start at a low position will have difficulty catching up, e.g. in educational achievement (DiPrete & Eirich, 2006).

In sectors where formal qualifications (education) are not required, to which individuals with low educational attainment are referred more than others, parental background will be protective as the social network becomes more important (Sirniö, 2016; Breen & Jonsson, 2007). This may be a double disadvantage for children and youth from OHC, who besides having a high risk of poor school performance also often have a weak social network due to inconsistency in their home environment or related socioeconomic factors (e.g., Geiger & Beltran, 2017; Cameron, Jackson, Hauari, & Hollingworth, 2012; Martin & Jackson, 2002).

There are many different approaches to CA, and the concepts depend on the discipline. In common parlance it is often referred to as virtuous cycles or vicious cycles. Two different forms of CA processes are commonly referred to: the strict, or simple, CA implies that the accumulation relates directly to the number of assets available at every given point in time, as with interest on invested money; the path-dependent CA states that the accumulation depends on ascribed attributes, e.g. race in the case of discrimination, and that the degree of accumulation differs between groups depending on such attributes. These different forms of CA are typically hard to separate from each other (DiPrete & Eirich, 2006).

Both the strict and the path-dependent CA processes are potentially present in the case of educational achievement in the OHC population. The pre-care situation is often associated with impaired schooling or low pre-school skills depending on age at first entry and the reason for OHC. Even though Sweden has a low level of ‘formal tracking’ in the educational system, the mediation effect of previous educational achievement becomes a sort of ‘informal tracking’, whereby knowledge gaps act as barriers that are hard to overcome. Knowledge gaps are a major obstacle for children in OHC (Tideman, Vinnerljung, Hintze, & Aldenius, 2011; Tordön, Vinnerljung, & Axelsson, 2014; Clemens, Klopfenstein, Lalonde, & Tis, 2018). The adult educational system in Sweden may also be harder for the OHC population to take advantage of, due to the weak support available upon leaving care.

Determinants in the OHC perspective

While sociological research often focuses on structural factors (the macro level), studies on children in care usually concern individual factors (the micro level) that relate to the placement situation. There are two main features specific to the OHC population: the event that brought about the OHC, and the discontinuity in the home environment. Both potentially affect school performance and educational attainment, which rely on previous school achievement (e.g., Erikson & Rudolphi, 2010) and parental support in today’s complex and extended transition phase into adulthood (Schoon & Lyons-Amos, 2016; Settersten & Ray, 2010). Previous findings on factors associated with educational

outcomes among children in care can be roughly divided into the significance of pre-care factors, in-care factors, and after-care factors.

Pre-care factors

Many in the OHC population have had a disadvantaged upbringing environment before entering OHC, in socioeconomic terms or due to other adverse childhood experiences. Placement in early years is typically brought about by neglect or maltreatment which may have resulted in injury, developmental delay, poor pre-academic skills, or other problems that have a negative impact on a child's school readiness (Pears et al., 2018), while teen OHC is often related to the youth's own disruptive behavior, e.g. substance misuse or delinquency (Vinnerljung & Andreassen, 2015). But there are also other types of reasons for OHC that are not related to social problems, e.g. parental health problems.

Some scholars have suggested that it is the pre-care experiences that are the pervading determinants of educational outcomes for children in care (Berridge, 2007; Trout et al., 2008). The literature on child development agrees that early family environments are major predictors of cognitive and non-cognitive abilities (e.g., Heckman, 2014). But there is also evidence that shows that cognitive ability is responsive throughout childhood and adolescence, and that children from deprived homes who are exposed to a more stimulating home environment will continuously improve their cognitive skills (Flynn, Tessier, & Coulombe, 2013; Tideman et al., 2011; Duyme, Dumaret, & Tomkiewicz, 1999; Fox, Almas, Degnan, Nelson, & Zeanah, 2011).

Evidence has been mixed as to the link between cognitive ability and poor school performance in the OHC population (O'Higgins et al., 2017): some studies have found strong links (Pears, Fisher, Bruce, Kim, & Yoerger, 2010), while others report weak or no links (Berger et al., 2009; Rees, 2013). Results from Swedish studies show that the OHC population performs at a lower level than peers in the majority population regardless of cognitive ability (Vinnerljung et al., 2010; Johansson & Höjer, 2014; Tideman et al., 2011). Instead, it has been suggested that accumulated knowledge gaps in school subjects are a main factor behind children in OHC performing below their potential. Such knowledge gaps might be the result of frequent absconding from school due to a problematic home situation or one's own disruptive behavior, or of frequent school changes due to moving between different homes or regions (Tideman et al., 2011; Tordön et al., 2014; Clemens et al., 2018; Berger, Cancian, Han, Noyes, & Rios-Salas, 2015).

Recent studies have found a high prevalence of psychiatric problems and the use of psychotropic drugs in the OHC population, both while in care (Socialstyrelsen 2014) and after care (Vinnerljung & Hjern 2014; Zlotnick, Tam, & Soman 2012). The connection between poor school performance and behavior problems is well known (Johnson, McGue, & Ianoco, 2009). This was

also found to be one of the most consistent risk factors for poor school performance in the OHC population in a recent review by O'Higgins and colleagues (O'Higgins et al., 2017). But underachievement and behavior problems function as a two-way street, as poor school performance also causes conduct problems (Gustafsson et al., 2010; Hinshaw, 1992).

There are promising results from studies of different schooling programs targeting children in OHC, which show that educational performance can be influenced and improved while children are in OHC (Forsman, 2019). Some of these studies also show that when school performance is boosted, behavioral problems decrease and interactions with friends and teachers, as well as the children's self-esteem, improve (Tideman et al., 2011; Männistö & Pirttimaa, 2018). However, the field of research on interventions aimed at improving school performance among children and youth in OHC is to date characterized by small and local studies. Little is known about how these interventions would work in full-scale practice. Still, almost every program that has been tested shows positive results on the school performance of children in care (Forsman, 2019). This can be interpreted as a sign of great potential for improvement of the current situation, rather than of all the programs tested being the best possible.

In-care factors

In contrast to scholars who emphasize pre-care factors, others have emphasized the care system itself and the many factors that are responsive throughout childhood and adolescence, including evidence on the parent-child link in educational attainment (Flynn et al., 2013; Jackson, 2007; Jackson & Ajayi, 2007). In-care factors are also of specific importance in studies of children in care, as they can be targeted and are responsive to interventions from society. However, it has been difficult to find strong and consistent in-care factors (protective or risk) associated with educational outcomes. Findings from studies on actual placement conditions, such as age at entry into care, length of time in care, instability in placement, and type of placement, have been mixed but have predominantly resulted in a weak (or no) association with educational outcomes (O'Higgins et al., 2017). Findings on self-reported placement conditions, such as caregiver involvement, caregiver's and children's aspirations, and placement literacy environment, have been more consistent (e.g., Flynn et al., 2013; Jackson & Ajayi, 2007; Cheung, Goodman, Leckie, & Jenkins, 2011). But it is hard to distinguish different factors from each other, as they are intertwined and accumulate over the life course. OHC populations differ among countries. In Sweden, as well as the other Scandinavian countries, special residential care for teenagers in the juvenile delinquency system is included in the OHC system (e.g., Thoburn, 2007). For children in a residential care institution, there may also be limited educational opportunities. When the residential care institutions were investigated in Sweden, major shortcomings

in the access to education were discovered (Skolinspektionen, 2010; Skolverket, 2007).

Discontinuity and uncertainty

For children and youth in OHC, the home environment is changed in a profound way upon placement, which may in itself have a negative effect on school performance by causing, e.g., school interruption (Fuglsang Olsen & de Montgomery, 2018), social network disruption (Perry, 2006), or emotional disruption (Schuengel et al., 2009). It is also suggested that adjusting to a new home environment and new caregivers creates a disturbance in the educational development, even when the child remains at his or her ‘old school’ (Berger et al., 2015). Placement interruptions can also occur several times during a child’s upbringing, and some researchers argue that instability in placements is one of the primary risk factors for a negative development among children in care (O’Higgins et al., 2017; Pecora, 2012; Moore, McDonald, & Cronebaugh-Auld, 2016; Waid, Kothari, Bank, & McBeath, 2016). In Sweden, it has also become more common for children in care to be placed in another municipality than where they lived in prior to the placement (Socialstyrelsen, 2020b), which implies that the responsible social welfare agency is situated in a different municipality than where the child lives and goes to school.

It is not possible to study actual instability in OHC based on the CWIR, as there are no data on where the child is being placed; i.e., in which foster home or residential care home the child is being placed. But when studying placement sequences i.e., placements over a continuous time period in the same type of placement, children in long-term care (born in 1990–1995) have on average 3.5 placement sequences before they exit care (Socialstyrelsen, 2020b). In a local Swedish study, social welfare acts were used to examine the prevalence of ‘placement breakdowns’ among young children in care (0–10 years of age) and children in long-term care (12-year-olds who had lived in the foster home for at least four years). Placement breakdowns referred to care arrangements that ended prematurely and unintentionally from the perspective of the child welfare services. The results showed that 24% of the long-term placements, and 13% of the placements concerning young children, ended with an ‘obvious breakdown’. When ‘suspected breakdowns’ were included, the prevalence increased to 26% and 21%, respectively. The initiator of the breakdown was most often the foster parents, in 45% of the cases in both groups. In the breakdowns among the young children, the initiator was also often the birth parents (38% of the breakdowns). The birth parents seldom initiated the breakdowns in long-term care; instead, in 28% of the cases the child him- or herself took the initiative for the breakdown. The median time in the foster home at the time of the breakdown was five months among young children and ten years among children in long-term care (Socialstyrelsen, 2012).

Regardless of the time spent in placement and the degree of stability, uncertainty often prevails in the OHC situation, for all parties involved. The placement is re-evaluated on a regular basis, typically every six months (Socialstyrelsen, 2013a), and neither the foster child, the birth parents nor the foster parents are certain as to how long the child will remain in the foster family. This may make it difficult to guide the child in the educational system. While evidence is sparse, there are studies that suggest that caregiver involvement tends to be lower in many foster family settings as compared to continuous family settings. Instability in placement and a lack of information are factors that contribute to difficulties in providing appropriate support for children in care (Pears et al., 2018; Beisse & Tyre, 2013; Munford & Sanders, 2016). The caregivers' school involvement was one of a few consistent factors associated with foster children's educational outcomes, according to a recent review by O'Higgins and colleagues (O'Higgins et al., 2017). Parental involvement in their child's learning has been found to be one of the most robust and causal factors in the parent-child link in the general population (Gorard, Beng, & Davies, 2012).

The uncertainty of permanency may also reduce a child's willingness to invest in his or her new school (if changed), and affect his or her ambition and aspiration concerning educational achievement. Many foster children maintain contact with their birth parents while in care, which might be supportive but could also collide with the foster parents' caregiving ambitions. Previous studies show that birth parents' influence on foster children's aspirations are long-lasting (Martin & Jackson, 2002). The birth parents' involvement may also cause conflicts between them and the foster parents, and contribute to disruption and instability in OHC (Socialstyrelsen, 2012; Vinnerljung, Sallnäs, & Berlin, 2014). Therefore, how the social welfare services handle the contacts with and support for the birth parents is also important for the well-being of children in care. OHC is an intrusive intervention that affects the entire family network. How the parents are affected by their child's OHC often has an indirect impact on the child. Many children describe worrying about their parent(s) while in OHC (Socialstyrelsen, 2013b). The child may have taken on great responsibility for the parent(s) before the placement, which makes them highly aware of the problems they have.

The foster family

Studies including factors on foster parents' educational level or socioeconomic status have shown only a slight (or no) association with foster children's educational outcomes (Heath, Colton, & Aldgate, 1994; Sawyer & Dubowitz, 1994; Wise et al., 2010; Zima et al., 2000). However, these studies were not primarily aimed at investigating parental education and, thus, were not designed for that purpose. Studies using large samples with detailed information on the characteristics of children, and their families, placements, and

environment are lacking in the search for evidence of low educational achievement among children in care (O'Higgins et al., 2017).

It has also been suggested that foster parents have lower educational attainment than parents in general, and hence that foster children more frequently live in non-academic environments and attend low-quality schools, and that this contributes to their low educational achievement (Fries et al., 2014; Cox, 2013; Zetlin, MacLeod, & Kimm, 2012; Cameron et al., 2012). However, this does not seem to be true for Swedish foster parents, who do not have particularly low educational attainment (Figure 9). Further, previous studies show that school contextual factors have a rather modest magnitude: 80–90% of the variation in educational achievement appears to be between families within schools rather than between schools (Breen & Jonsson, 2005). And evidence on increasing performance gaps after school holidays (Downey, von Hippel, & Becket, 2004; Ready, 2010) supports scholars who claim that it is families rather than schools that enforce inequality in educational achievement (Heckman, 2014).

There is also evidence that pessimistic expectations regarding foster children's chances of success in school are common among both foster parents, social workers, and teachers (Egelund, Hestbaek, & Andersen, 2004; Knudsen, 2009; Tideman et al., 2011). Other studies suggest that foster parents' own problems, e.g. health concerns, have a negative influence on foster children's educational outcomes (Cheung et al., 2011; Tarren-Sweeney, 2008). Many foster families are also relatively large (Table 1). Previous studies have shown associations between fewer children in the household and higher academic achievement, for both adoptive children (Sacerdote, 2004) and foster children (Sawyer & Dubowitz, 1994). Kinship foster families are often smaller in size compared to regular foster homes (Table 1). Staying with relatives also might involve a higher degree of continuity, as the child remains in their family network. Evidence from previous studies suggests that foster children who live with relatives generally have fewer problems caused by pre-care experiences, e.g. behavior problems, cognitive ability, or poor pre-school abilities (Cheung et al., 2011).

According to social comparison theory, the feeling of 'being different' might have a negative impact on children's development and could to some extent weaken foster children's gains from otherwise advantageous factors (Cheung et al., 2011; Cheung, Lwin, & Jenkins, 2012; Feinberg, Neiderhiser, Simmens, Reiss, & Heatherington, 2000). In a study on educational success among a group of high achievers who had been in care, nearly everyone stressed the importance of being like everyone else, e.g. having the freedom and financial support to take part in outside hobbies and interests so that they could confidently socialize with their peers (Martin & Jackson, 2002). There are not many studies that have examined the general living standard of children and youth in care in comparison to peers in the general population, but one Swedish study found that teenagers in residential care often had fewer

material resources than peers who lived with their birth parents (Sallnäs, Wiklund, & Lagerlöf, 2010). In another Swedish study among 12- and 15-year-olds, children who did not live with their birth parents (most often foster children) more often reported being bullied and not being able to afford the same clothes and engage in the same activities as their peers (Berlin, 2012a). Children who were not living with their birth parents were worse off in high-performing than in low-performing schools (Berlin, 2012b). Evidence from other studies suggests that a lack of activities outside school affects the schooling situation of children in care, e.g. making it difficult to engage in team activities with classmates (Quarmby, Stanford, & Elliot, 2018).

Post-care factors

Even though education is not the only yardstick for a successful transition into adulthood, there is reason to believe that it is especially important for the OHC population as many leave home early to take on adult roles and responsibilities without the support usually available to peers who grow up in their family of origin (Greeson, 2013; Ejrnæs, Ejrnæs, & Frederiksen, 2011; Geiger & Beltran, 2017; Cameron et al., 2012; Höjer & Sjöblom, 2009; Martin & Jackson 2002; Franzén, Vinnerljung, & Hjern, 2008; Kestilä, Väisänen, Paananen, Heino, & Gissler, 2012), partly because many of their birth parents are dead (Franzén & Vinnerljung, 2006). While for some foster children the contact with their foster family remains after leaving care, others are left to fend for themselves. Some foster families might feel that their responsibility ends there. This may to some extent be in line with international studies showing that where the welfare state is strong, family obligations are moderated (Daatland, Herlofson, & Lima, 2011). The care might also have led to geographic distance from the origin family network. Intergenerational contacts differ between socioeconomic groups: individuals in low socioeconomic strata tend to have more frequent contacts with their family than individuals in high socioeconomic strata, which is partly due to less economic need and higher geographic mobility among the highly educated (Lundholm & Malmberg, 2010). For foster children the need for support can be great, but the distance far and the network weak.

A major factor for foster children's opportunities in future life is therefore the support they receive when they leave care (Mendes, Michell, & Wilson, 2014; Cameron et al., 2018). Whereas many countries have various forms of after-care systems for children from foster care, this is not the case in Sweden, where the general welfare system is expected to cover up for the absence of a family network (Jackson & Cameron, 2012; Höjer & Sjöblom, 2009). However, previous studies show that there is a gap between the needs of young people leaving care and the support they receive (Geiger & Beltran, 2017; Cameron et al., 2012; Martin & Jackson, 2002). Support for children aging out of OHC is found to improve their educational outcomes (Courtney &

Hook, 2017). Studies on the after-care situation for care leavers in Sweden show that they often worry about how to cope with housing, personal finances, and employment (Höjer & Sjöblom, 2009). And furthermore, that even though the social services care and are aware of their responsibility towards young care leavers, often not acknowledge care leavers weak position and need of additional support beyond the general support available to all Swedish citizens (Höjer & Sjöblom, 2011).

Employment outcomes tend to be poor among young adults from OHC, partly as a result of many having low educational attainment (Mendes, 2009; Cameron et al., 2018; Hook & Courtney, 2011; Stewart Kumb, Barth, & Duncana, 2014; Cassarino-Perez, Crous, Goemans, Montserrat, & Castellà Sarriera, 2018; Font, Berger, Cancian, & Noyes, 2018). In labor market segments where other qualifications than education are decisive, social networks and ascribed characteristics become more important, along with qualifications such as having a driver's license or previous work experience (Breen & Jons-son, 2007). Studies from Europe and the US show that having work experience from holiday jobs while still in school was an important factor for progression towards work establishment after care (Arnau-Sabatés & Gilligan, 2015; Stewart et al., 2014; Courtney et al., 2011).

Leaving care without an adequate education is strongly associated with an excess risk of several different adverse outcomes in future life, for example substance misuse and mortality (e.g., Kääriälä & Hiilamo, 2017; O'Higgins et al., 2017; Fries et al., 2014; Gypen et al., 2017; Vinnerljung et al., 2010; Berridge, 2012; Forsman et al., 2016). Almquist and colleagues (2018) found that the differences in survival time between the OHC population and their peers in the majority population corresponded to more than a decade of life lost between ages 20 and 56, and that school failure was strongly associated with excess mortality.

Data and methods

Table 2. Data sources

Holder	Register	Used in Study
Sweden		
Statistics Sweden (SCB)	The Total Population Register	I, III, IV, V
	The Population and Housing Census	I, V
	The Longitudinal Integration Database for Health Insurance And Social Studies	I, III, IV, V
	The Multi-generation Register	I, III, IV, V
SCB and the Swedish School Authority	The National School Register	I, IV, V
The Swedish Board of Health And Welfare	The Child Welfare Intervention Register	I, III, IV, V
	The National Cause of Death Register	I, II, V
	The National Inpatient Register	I, III, IV, V
The Swedish Drug Addict Treatment Evaluation	The SWEDATE Database	II
The National Council for Crime Prevention	The Register of Criminal Offenses	I, II, V
Denmark		
Statistics Denmark	The Population Register	III, IV
	The Register on Children and Youth in out-of-home care	III, IV
	The Education Register	III, IV
	The Register on Income and Social Assistance	III, IV
	The Psychiatric Register	III, IV
Finland		
The Finish Institute for Health and Welfare	The Medical Birth Register	III, IV
	The Social Assistance Register	III, IV
	The Hospital Discharge Register	III, IV
	The Child Welfare Register	III, IV
Centre for Pensions	Employments	IV
The Social Insurance Institution	Study Grants	IV
Statistics Finland	The Education Register	III, IV
The Finnish Population Register Centre	The Population Register	III, IV

Population register data have been used in all five studies. Four of the studies are based entirely on register data, whereof two also include register data from Denmark and Finland. One study (Study V) is based on interview data linked to register data. Table 2 presents the data sources for each study. The different registers were linked using the unique ten-digit ID numbers (PIN) given to all residents of Sweden (as well as Denmark and Finland) at birth or immigration. The overall quality of the registers used in this study is regarded as high.

The Swedish Child Welfare Intervention Register

The descriptive section and four of the five studies in the thesis are based on the Swedish Child Welfare Intervention Register (CWIR), held by the Swedish National Board of Health and Welfare. The register covers all individuals, born in 1960 and onward, who have received OHC through the local child welfare services at any time from 1968 onward (Figure 20). Until 1997, the register also included all individuals who were issued a contact person or contact family by the child welfare services. This is an in-home intervention that is still used by the child welfare services. A contact person is a support person with whom the child meets on a regular basis while still living at home. A contact family is a support family with whom the child spends time on a regular basis, e.g. every other weekend.

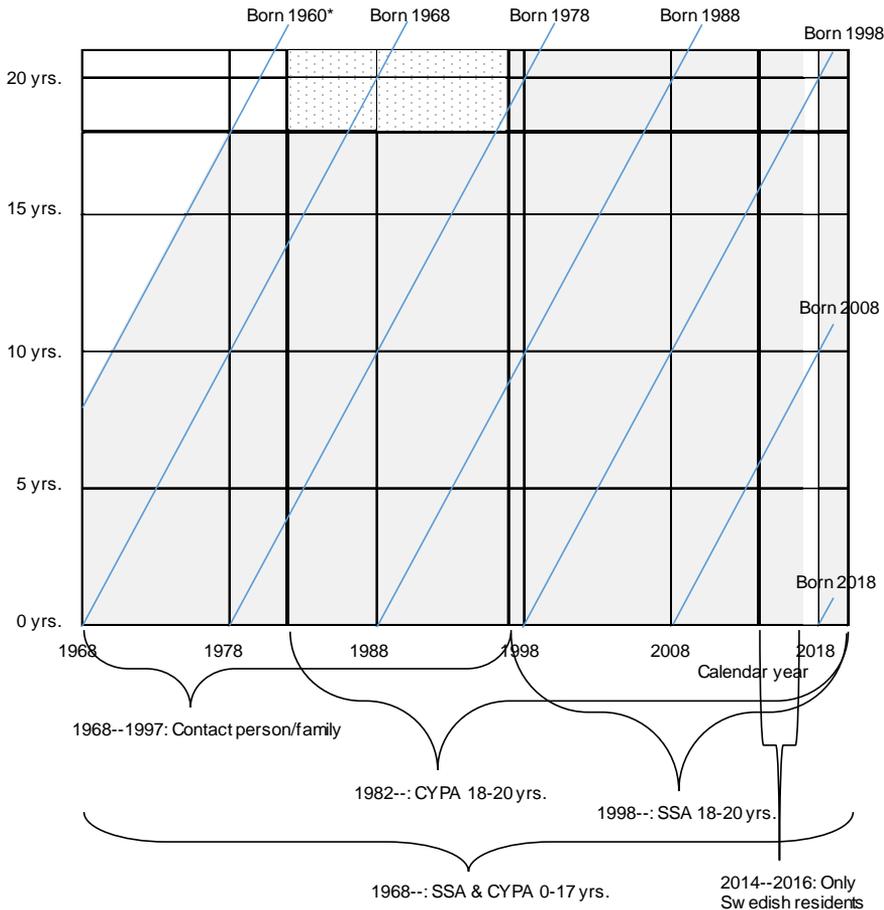
The OHC population includes unaccompanied asylum seekers. Until 2013, all OHC was included in the CWIR, even OHC among unaccompanied asylum seekers without permanent residence. During the period 2014–2016, only Swedish residents were included in the CWIR. Data are missing for 2017, when the data registration system was changed. From 2018, unaccompanied asylum seekers are included in the CWIR regardless of residency. In 2018 about a third of all individuals in OHC were unaccompanied asylum seekers, but the proportion varied considerably in different age groups. Among the youngest, 0–6 years, less than 1% were unaccompanied asylum seekers. The corresponding rates in the other age groups were 7% among children aged 7–12 years, 29% among teenagers aged 13–17 years, and 45% among young adults aged 18–20 years (Socialstyrelsen, 2020b).

The CWIR is used mainly for administrative purposes², but the register is also available for research under certain conditions. It offers good opportuni-

² Variables in the CWIR: identification number (PIN); date of birth; sex; country of birth (until 2013); calendar year of last immigration (until 2013); birth parents' countries of birth (until 2013); date of entry and exit of measure; type of measure (from 1990 onward); date of decision of measure; type of placement; number of days in measure; person(s) having custody at entry and exit of measure; specification of measure; where the person went upon exit from measure (from 1998 onward); municipality of responsible social welfare agency; municipality of placement.

ties for longitudinal register-based research, and can be linked to other population registers through the individual ID number (PIN). Data on age and time spent in OHC are of fairly high quality, but for privacy reasons there is limited additional information beside the dates and legal jurisdiction of placement. The register does not hold information on the family or the residential care institution where the child stayed but rather only the type of care home it was; i.e., foster home or residential care home, with or without restrictions.

Figure 20. Coverage in CWIR 1968–2018



* Earliest birth cohort in the register.

Voluntary placements (SSA) under the Social Services Act (2001:453) applied to children (0–17 years) during the period 1968–1997, and children and young adults (0–20 years) from 1998 onward. Involuntary placements (CYP A) under the Care of Young Persons Act (1990:52) applied to children (0–17 years) during the period 1968–1981, and to children and young adults (0–20 years) from 1982 onward. Contact person or contact family is an in-home intervention still used by child welfare services, but which was only registered until 1997. A contact person is a support person with whom the child meets on a regular basis while still living at home. A contact family is a support family with whom the child stays on a regular basis, e.g. every other weekend.

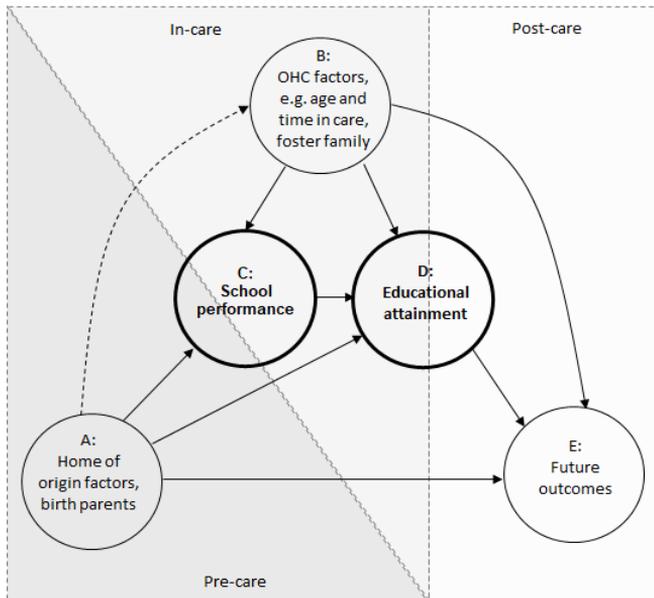
The register holder was Statistics Sweden during the period 1968–1993, Statistics Sweden in collaboration with the Swedish Board of Health and Welfare in 1994, and the Swedish Board of Health and Welfare since 1995. The data collection was carried out by Statistics Sweden during 1968–2013, and by the Swedish Board of Health and Welfare since 2014. Data are incomplete for 2017 due to a change in the data collection procedure.

Study design

The individual studies in this thesis are designed with a life course perspective. As all studies except one (Study V on intergenerational transmission of education in stable long-term care) involve comparison groups without care experience, the care history was captured by creating stratified study groups rather than covariates for, e.g., age at first entry and total time in care. The studies follow an approach whereby several regression analyses were carried out in different steps over the life course, in order to examine the relation between different factors (cf. Baron & Kenny, 1986). The simplified graph below (Figure 21) is a conceptual model of the study design: Study groups and background factors represent the home of origin (A) and the OHC experience (B). Educational outcomes were represented by school performance in primary school (C) and educational attainment at different ages (D). Future outcomes (E) were measured as different life events in young adulthood; i.e., psychosocial problems (Study I), mortality (Study II), and NEET (Study IV). The design is similar to the status attainment model by Blau-Duncan (Figure 17), in which home of origin (A) represents social origins, future outcomes (E) represents social destination; school performance and educational attainment (C and D) represent education; and OHC factors (B) represent factors independent of social origins.

Factors associated with educational outcomes among children in care can be roughly divided into pre-care factors, in-care factors, and post-care factors. Besides the issue of causality, one prevailing ‘research problem’ is that these factors are seldom clear-cut; entry into care takes place at different ages, and some spend a long time there while others only stay a few days. There can be several episodes of OHC, and some move back and forth between their home of origin and a foster family, or between different foster families and care homes (as illustrated by the cover picture). When in care, continuous contact with the home of origin is generally promoted, with some children living in kinship care whereby they remain in their origin network.

Figure 21. Conceptual model of the study design



Study population

The issues of differences in causality between pre-care and in-care factors as well as of heterogeneity in OHC experience were approached primarily by restricting the study populations and creating specific study groups in accordance with each research question. Study characteristics are shown in Table 3 at the end of this chapter.

In order to ensure that the study populations had been in the Swedish educational system during the entire primary school period (age 7–15 years) and during follow-up, the study populations were constrained in different ways. The first study (I) was restricted to individuals born in 1972–1981 who had not immigrated or emigrated after school started at age 7 and they were followed until 2005, i.e. age 24–33 years. In the second study (II), event history analysis was used and restrictions were handled through censoring. The study population was followed from their exit from substance misuse treatment in the early 1980s (ages 15–35 years) until 2013. The two Nordic comparative studies (III and IV) were restricted to domestic-born individuals, due to the differences in immigration rates between the Nordic countries. Due to data restrictions, the study population consisted of individuals born in 1987 who were followed until 2010 when they were 23 years old.

The long-term care group

Long-term care was of specific concern in the studies in this thesis because the OHC situation has had a great influence on these children's lives. The majority had been in OHC for most of their childhood, and society has taken up a long-term societal commitment of assumed parental responsibilities; i.e., *in loco parentis*. In Study I, care leavers from long-term care were compared with the majority population, and with two comparison groups with background characteristics similar to those of the care leavers, but without OHC experience and thus assumed to have had more stable living arrangements. The care leavers had entered care before primary school started, and exited care in their late teens (all had turned at least 17 years of age when they left care). With these restrictions, the average time spent in care was 11 years.

Study V consisted of individuals who had been in stable long-term care, as the aim was to investigate the influence of foster parents' education on foster children's school performance and educational attainment. This required consistent exposure from foster parents during primary school years, which was done by restricting the study population to individuals who had lived with the same foster family for two consecutive censuses (with five years between). Their average time spent in care was 14 years. In the Nordic comparative studies (III and IV), the Long-term group was one of four OHC sub-groups.

OHC sub-groups

The OHC population is heterogeneous and the length of time in care ranges from days to entire childhoods, which reflects the varying responsibility society assumes over these individuals' lives. Age at first entry into care is also related to the reason for OHC. When first entry occurs at a young age, the reason is normally related to parental behavior. When it occurs in the teenage years, the higher the age the more often the reason for OHC relates to the youth's own disruptive behavior (Vinnerljung, 1996). Those who have been placed at an early age are also known to make up a more homogeneous OHC sub-group than those who entered care for the first time in their teens (Sallnäs, Vinnerljung, & Kyhle-Westermark, 2004).

By dividing the population into sub-groups based on age at first entry into care and total time spent in care, more homogeneous sub-groups can be created (Triselotis, 1989). In the Nordic comparative studies (III and IV), the OHC population was divided according to age at first entry and total time in OHC. This way of dividing the OHC population into mutually exclusive groups has proven constructive in previous Swedish register-based research. The study groups were: Early short care (first entry into OHC before 13 years of age, total time in OHC < 1 year); Early intermediate care (first entry into OHC before 13 years of age, total time in OHC at least one year but less than five years); Long-term care (first entry into OHC before 13 years of age, total

time in OHC at least five years); and Teen care (first entry into OHC at 13 years of age or older).

In studies on educational outcomes, first entry and total time in care are also relevant for the schooling situation. Among those who entered care for the first time in their teens, many had already left primary school and the child welfare services might have had little impact on their schooling situation. Many in the OHC population have also been subjected to different in-home interventions by the child welfare services, but these interventions have limited coverage in the CWIR and are thus not possible to investigate in any depth (Study I included a comparison group who had had early in-home interventions but no OHC experience).

Comparison groups

Study I included two comparison groups that were known to have a social background similar to that of the care leavers from long-term care, individuals who had been subjected to in-home interventions by child welfare services in young adulthood, and national adoptees (Vinnerljung et al., 2010).

Study V compared substance misusers with and without OHC experience. Since the entire population had been in substance misuse treatment, the comparison group (substance misusers without OHC experience) was assumed to be similar to the OHC group in regard to background factors associated with substance misuse, e.g. psychosocial factors (Stone, Becker, Huber, & Catalano, 2012).

Educational outcomes

The studies were primarily concentrated at the bottom stratum of the educational differential; i.e., poor school performance and low educational attainment. Poor school performance covered the comprehensive level in the educational system, while educational attainment at higher ages involved the choice to continue to higher education (cf. primary and secondary effect in the section on reproduction of inequality). In the examination of the transition through the educational system, poor school performance was used as a control variable for continuing to higher education (Studies I, IV, V). Hence, poor school performance was used as both an outcome and a control variable in the study design.

Poor school performance referred to the individuals' grades from their last of in compulsory school, i.e. the ninth grade in primary school, from which Swedish students typically graduate at age 15–16. Using the mean and the standard deviation in the study populations a relative measurement (a category variable) was constructed (details provided in the separate articles), which could be used regardless of differences in the grading system or curriculum, between birth cohorts or between the Nordic countries (Denmark, Finland,

and Sweden). The grading levels at different schools in Sweden are monitored by the Swedish School Authority through annual national tests in order to maintain a uniform grading policy, as grades are a determinant of continuing to higher education.

No grades and low grades were often combined in the studies. *No grades* is defined as being missing in the National School Register (NSR), while *Low grades* is defined by a grade point average (GPA) below the mean minus one standard deviation. The coverage rate in NSR is high, with only a few percent missing in the total population. However, the proportion differs substantially between the OHC population and peers without care experience. Being missing in the NSR can be the result of dropping out or frequently absconding from school, or of attending a school that does not report its grades to the Swedish authorities; i.e., some schools at residential care institutions and schools for students with special needs (e.g., due to learning disabilities). It is not possible to identify the reason for missing values in the NSR.

In the studies, low educational attainment refers to not having completed an educational level at the upper secondary level according to the National Educational Register. Today, upper secondary education is regarded as crucial for entrance onto the labor market. In Sweden, almost all students enter upper secondary education: by age 20 about 80% have completed an education at the upper secondary level, and ten years later, at age 30, about 90% have completed this level.

Future development outcomes

In Study I, poor school performance (no or low grades in the final year of the primary school system) was the outcome in the first step; upper secondary education despite poor school performance was the outcome in the second step; and different types of psychosocial problems were the outcomes in the third step. Besides poor school performance, outcomes were measured in young adulthood (from age 20 to the calendar year of 2005). *Suicide attempts* referred to admittance to hospital as a result of attempted suicide or suspected attempted suicide. *Drug abuse* referred to conviction of drug offenses, or having died/been hospitalized due to a drug-related diagnosis. *Alcohol abuse* referred to conviction of drunk driving, or having died/been hospitalized due to an alcohol-related diagnosis. *Serious criminality* referred to having been sentenced to probation, prison, or forensic psychiatric care. *Welfare dependency* referred to more than 50% of one's disposable annual income at age 25 consisting of social welfare. *No indications of psychosocial problems* referred to no registered suicide attempts, drug abuse, alcohol abuse, or serious criminality after one's 20th birthday, not being dependent on social welfare at age 25, and still being alive in 2006.

In Study II, mortality was the outcome. In Study III, having only primary education at age 23 was the outcome. In Study IV, NEET was the outcome. In

Study V, poor school performance (no or low grades in the final year of primary school system) was the outcome in the first step, and having only a primary education at age 26 was the outcome in the second step.

Control variables

All studies except Study V on intergenerational transmission of education in stable foster care compared the OHC population with peers without OHC experience, and hence, OHC factors could not be included in the models as covariates. The life course perspective was handled by the study design, with variables measured at different stages of the life course; e.g., birth parents' characteristics were regarded as proxies for early childhood factors that have been identified as risk factors for OHC (Simkiss, Stallard, & Thorogood, 2013), and grades in the last year of primary school were regarded as proxies for the schooling situation during the compulsory school years. This obviously does not cover the entire complexity of individual factors during the life course. The national population registers have the benefit of covering the entire population, but at the cost of merely holding administratively collected information.

The proxies for early childhood factors were: In Study I, birth mother's educational attainment as well as birth parents' substance abuse and psychiatric care; in Study II, self-reported conditions on parental alcohol abuse during childhood; in Studies III and IV, birth mother's educational attainment, long-term social assistance, indication of substance abuse, and psychiatric care; and in Study V, birth mother's educational attainment (in combination with foster mother's educational attainment), birth country, year of birth, indication of substance abuse, and psychiatric care.

Study II includes control variables on self-reported conditions before admittance to substance misuse treatment: vocational training, regular employment > 1 year, psychiatric care and/or suicide attempts, daily contact with non-addict and addict friends, and predominant drug before intake to treatment. Crime active years and years in prison were also retrieved from registers.

Study V includes control variables on OHC experience (age at entry into care and total time in care) and foster family characteristics (foster mother's educational attainment [in combination with birth mother's educational attainment], birth country, and year of birth, as well as the foster family's household size, relationship with the foster child, and whether the household had the same two foster parents in both censuses).

Grade point average (GPA), poor school performance, or school failure was used as a control variable for later outcomes in Studies I, II, IV, and V.

Table 3. Study characteristics

Research question	Study population	Variables and statistical methods
Study I. Relation between school performance, educational attainment, and psychosocial problems in young adulthood.	Swedish residents born 1972–1981 (n=913,207). Individuals who emigrated or immigrated after age 7, or died before age 17, were excluded from the study. Follow-up until ages 24–33 in 2005.	<i>Outcomes:</i> Grades in primary school. Secondary education despite poor school performance. Psychosocial problems in young adulthood (suicide attempts, drug abuse, alcohol abuse, serious criminality, welfare dependency). <i>Exposure:</i> Care leavers from long-term care, national adoptees, and children who received in-home interventions before their teens. <i>Control variables:</i> Sex, year of birth, birth mother's (BM's) education, and birth parents' psychiatric care and substance abuse. <i>Statistical method:</i> Cox regression, survival analysis, attributable risks.
Study II. Mortality in relation to early school failure and OHC among people treated for substance misuse.	Substance misusers in residential care treatment 1982–1983 (n=1,036). Ages 15–35 years at entry into treatment. Follow-up until 2013.	<i>Outcome:</i> Death. <i>Exposure:</i> OHC experience, school failure. <i>Control variables:</i> Age at entry into treatment, parental alcohol abuse, study subject's vocational training, regular employment, psychiatric care, suicide attempts, predominant drug misuse, daily contact with addicts, crime active years, years in prison. <i>Statistical method:</i> Cox regression, sex-specific models.
Study III. National variation in early school leaving in three Nordic countries.	Domestic-born in 1987 in Denmark (n=55,995 of whom 3,056 in OHC); Finland (n=58,855 of whom 1,884 in OHC); and Sweden (n=100,152 of whom 3,209 in OHC). Follow-up until age 23 in 2010.	<i>Outcome:</i> Only primary education at age 23. <i>Exposure:</i> OHC experience. <i>Control variables:</i> Sex, year of birth, BM's educational attainment, social assistance, psychiatric disorders, and alcohol and drug abuse. <i>Statistical method:</i> Logistic regression. Country data analyzed separately.
Study IV. National variation in NEET in relation to poor school performance in three Nordic countries.	Domestic-born in 1987 residing 2008–2010 in: Denmark (n=54,269 of whom 2,997 in OHC); Finland (n=55,751 of whom 1,835 in OHC); and Sweden (n=99,499 of whom 3,188 in OHC). Follow-up until age 21–23 in 2008–2010.	<i>Outcome:</i> NEET at age 23. <i>Exposure:</i> OHC experience and poor school performance. <i>Control variables:</i> Sex, year of birth, grades in primary school, BM's educational attainment, social assistance, psychiatric disorders, and alcohol and drug abuse. <i>Statistical method:</i> Logistic regression. Country data analyzed separately.
Study V. Intergenerational transmission of education from foster parents.	Foster children born 1972–1978, who entered OHC < age 7 and stayed in OHC > 5 years, and lived with the same foster mother (FM) in 2 consecutive censuses (with 5 years between) (n=2,167). Individuals who emigrated or immigrated after age 7, or died before age 17, were excluded from the study. Follow-up until age 26 in 2005.	<i>Outcomes:</i> Poor school performance in primary school (age 15–16). Only primary education at age 26. <i>Exposure:</i> Combined maternal education, BM's and FM's. <i>Control variables:</i> Year of birth, age at first placement, total time in care, BM/FM born abroad, household size, age of BM/FM, kinship care, adoption, two foster parents in household, and BM's substance abuse and psychiatric care. <i>Statistical method:</i> Logistic regression, sex-specific models.

Contribution and summary of main findings

It has long been acknowledged by the child welfare profession that many children in care have a problematic school situation that inflicts consequences on their future opportunities. Studies visualizing the extent of the problem were previously sparse, partly due to a lack of data (e.g., Jackson, 1994). Even though a vast body of international research has now shown that the high prevalence of poor school performance and low educational attainment in the OHC population cuts across countries and time, many studies still rely on small, local samples (e.g., O'Higgins et al., 2017). In this respect, Sweden and the other Nordic countries can make an important contribution to the research field through our high-quality data sources, which are longitudinal and cover the entire population. The Swedish Child Intervention Register, started in 1968, now contains half a century of OHC data.

The main focus of this thesis is educational stratification in the OHC setting. The individual studies investigated: how the OHC population manages in the educational system compared to peers in the general population and compared to peers with similar socioeconomic background but without OHC experience; how poor school performance relates to future educational attainment and development in young adulthood; cross-country differences in the OHC population's educational patterns in the Nordic countries; and whether foster parents' educational attainment matters for their foster children's educational outcomes. The description in the introductory section examined the educational patterns in the OHC population during the last decades.

Summary of the individual studies

Study I.

School performance in primary school and psychosocial problems in young adulthood among care leavers from long-term foster care

Study I had an overall perspective on educational stratification among care leavers from long-term care, compared to their majority population peers and two comparison groups: national adoptees and children who had received early in-home interventions. Care leavers refers to youths who exited care to

live on their own (83% of all 18-year-olds with long-term care experience were care leavers). The comparison groups, national adoptees and the in-home intervention group, had socioeconomic background factors similar to those of the care leavers, but more stable living arrangements (Vinnerljung et al., 2010). The analyses were performed in three steps; the first examined the risk of poor school performance in primary school (i.e., no or low grades at graduation); the second examined the chance of upper secondary education in relation to poor school performance; and the third examined the risk of different psychosocial problems in young adulthood (i.e., suicide attempts, alcohol abuse, drug abuse, serious criminality, and welfare dependency) in relation to poor school performance, separately and in a summarized category.

The results showed that 60% of males and 42% of females among care leavers had poor school performance upon graduation from primary school. When sex and year of birth were adjusted for, the risk of poor school performance was about three times higher among care leavers than among their majority population peers. The two comparison groups had about twice the risk of poor school performance as their majority population peers. Adjustment for factors related to the birth parents (i.e., maternal education and indications of parents' substance abuse and psychiatric disorders) decreased the excess risks of poor school performance in all groups, by close to 30% in the comparison groups and close to 50% in the care leavers' group.

The results also showed that care leavers had lower chances of completing upper secondary education and higher risks of adverse development, especially as compared to their majority population peers but also as compared to the comparison groups, even among those with poor school performance. Care leavers from long-term care had 6–11 times higher risks of suicide attempts, substance abuse, serious criminality, and long-term social assistance as compared to their peers in the majority population. Up to 55% of the excess risks of future psychosocial problems among youth who age out of long-term foster care were statistically attributable to their dismal school performance. Most of the effect from factors related to birth parents were accounted for by grades in primary school. Care leavers excess risks were considerably higher than in the other comparison groups. The excess risks were 2–3 times higher among national adoptees, and 3–6 times higher among the in-home intervention group, than among the majority population.

Study I was a continuation of a previous population study on school performance among Swedish children (Vinnerljung et al., 2010) that included the entire long-term care group (more than 5 years in care, on average 11.5 years in OHC). These results had shown that children were sorted early in the Swedish educational system. Most of the influence from socioeconomic background factors on later outcomes was mediated by grades in primary school. Poor school performance was a strong risk factor for adverse development in the entire child population, but had a substantially stronger influence on the Long-term group's development as school failure was highly prevalent among

them. The Long-term group also received lower grades, and had lower educational attainment, than peers with the same cognitive capacity (only males were compared, based on cognitive tests upon military conscription), and had lower chances of completing a secondary education when their grades were poor. The notion that the link between poor school performance and adverse development in the OHC population allows for causal interpretations was later supported by another Swedish national cohort study (Forsman et al., 2016).

An important remark in regard to the high risk of adverse development among children and youth from OHC is that, in adulthood, they constitute a large share of disadvantaged population groups. In this study they constituted 18–21% of the young adults with the studied adverse outcomes (i.e., suicide attempts, substance abuse, and serious criminality), even though they only constituted 3% of the total study population (Figure A7 in Appendix).

Study II.

The relation between out-of-home care, early school failure, and premature mortality: A 30-year follow-up of people treated for substance misuse in Sweden

The high risk of adverse development in the OHC population was indeed confirmed in Study II. Here, the study population consisted of clients (15–35 years of age) in residential treatment for substance misuse in the early 1980s. This population was estimated to comprise somewhere between 50% and 75% of the serious substance misusers in Sweden at the time (Olsson, 1988). The treatment focused on substance misuse, including poly drug misuse and also in combination with alcohol misuse. The data, originating from a research project called SWEDATE (Swedish Drug Addict Treatment Evaluation), consisted of interview data collected at the time of treatment, which had been linked with register data covering the period from treatment until 2013. The main focus of the study was to examine whether early school failure differed between clients with and without OHC experience, and whether early school failure was related to their risk of premature mortality when controlling for life course factors associated with mortality among people with substance misuse problems. This was done in a life course perspective drawing on the theory of cumulative disadvantage.

The data set provided a good opportunity for studying OHC, because the study population was both fairly homogenous in regard to background factors and offered an adequate comparison group for the OHC population. Furthermore, it covered a period of OHC that was not included in the CWIR (1945–1967) and had a long follow-up (30 years). The study aimed to deal with, to some extent, the criticism that OHC in general population studies merely mediates a marginalized social upbringing rather than the effects of OHC. The

interview data was also rich, in terms of information both on upbringing factors (e.g., home of origin, and OHC experience) and on future development in adulthood. This made it possible to control for a number of life course factors that are not available in the register data, and offered the opportunity to study adverse development from the perspective of cumulative (dis)advantage, whereby factors on, e.g., previous work experience, substance misuse, and criminality were included in the analysis. The underlying hypothesis of the study was that school failure, besides being a mediator of all sorts of problems during the compulsory school years, was also a likely confounder for a less successful transition into adulthood and, thus, for greater difficulties in recovering from substance misuse.

The results showed that 54% of substance misusers had been placed in OHC as children, half in early care (at age 0–12 years) and half in teen care (at age 13–17 years). Clients with OHC experience had a higher prevalence of school failure (dropout from compulsory school) than other clients, and an unadjusted excess mortality risk, albeit only statistically significant for females from early OHC. School failure was strongly associated with the excess mortality in females, and adjusted for half of the excess mortality in the overall OHC population. The strong association between school failure and mortality among females remained after adjusting for additional background factors known to be associated with mortality among people with substance misuse, while almost none of the excess mortality risk associated with early OHC remained.

The relation between childhood OHC, school failure, and premature mortality differed between the female and male clients. For females, there was an excess mortality associated with early OHC which seemed to be mediated through school failure, parental alcohol abuse, own alcohol or opiate misuse, and criminality. For males, childhood OHC and school failure were not significantly associated with an excess mortality, instead the significant risk factors were no regular employment, psychiatric care and/or suicide attempts, own alcohol or opiate misuse, and criminality. A limitation in this study was that the substance misusers were followed from a specific treatment occasion rather than over the entire life course. Evidence from other mortality studies in the OHC population suggests that the mortality risk increases shortly after exit from OHC (Manninen et al., 2015), which might explain the lower excess mortality among males.

Study III.

Early school leaving by children in out-of-home care: A comparative study of three Nordic countries

The main focus of Study III was to investigate Nordic cross-country differences in educational attainment among young adults from OHC compared to

same-aged peers without OHC experience. The impact of national-level factors on the OHC population's educational outcomes has been sparsely researched. In this study we had the entire 1987 national birth cohorts for Denmark, Finland, and Sweden, and the study populations were restricted to domestic-born individuals, which also gives a lower OHC rate as compared to national official statistics. The study examined the effect of OHC on early school leaving (not completed upper secondary education at age 23) when adjusting for a set of maternal factors (i.e., educational attainment, long-term social assistance, and indication of substance abuse and psychiatric disorders). The OHC population was divided into mutually exclusive study groups in regard to OHC experience (i.e., first entry into OHC before the teenage years combined with short-, intermediate-, and long-term care, and teenage placement).

While the child welfare systems are similar among the Nordic countries, Denmark and Finland have specific after-care support programs for care leavers while Sweden does not. The educational systems are also similar among the countries, but differ in the arrangement of vocational education at upper secondary level. This is argued to primarily target students from lower socioeconomic background, and students with lower academic achievements, since they are more likely to enter vocational tracks compared to students from higher socioeconomic background who are more likely to enter academic tracks. Vocational tracks are also more common among youth from OHC than academic tracks (Jackson & Cameron, 2012). Denmark has a long tradition of apprenticeship-based training while Finland and Sweden have school-based vocational education, which serves as preparation for tertiary education.

The results showed that young people from OHC were 24–39 percentage points more likely to lack upper secondary education compared to their peers without OHC experience, when results were adjusted for maternal background factors. The OHC population's excess risk of early school leaving was higher in Denmark than in Finland and Sweden. However, the apprenticeship system in Denmark made the comparison somewhat biased, as vocational training there is partly registered as employment and stretches over a longer time. Due to data restriction, the study population could only be followed until age 23. In the study on NEET (below), employment and higher education were combined.

Study IV.

Long-term NEET among young adults with experience of out-of-home care: A comparative study of three Nordic countries

Study IV was a continuance of Study III, starting earlier in the educational system with school performance in primary school and including lack of em-

ployment in young adulthood (age 21–23 years). Besides dealing with the registration of students in apprenticeship employment in Denmark, the study's aim was to examine a crucial phase of the school-to-work transition in relation to poor school performance across the Nordic countries. This was done not only by focusing on higher education but also by including other paths to labor force establishment and self-sufficiency. It originated from the question of whether the OHC population finds other paths to labor market attachment in light of their low educational attainment. This was done by studying long-term NEET (Not in Employment, Education, or Training) as an outcome, measured as having no income related to education or employment in two out of three subsequent years. This indicates a severe form of inactivity whereby individuals stand far from the common transition paths.

Similar to Study II (which examined the relation between OHC experience, school failure, and premature mortality among substance misusers), it elaborated on cumulative (dis)advantages. In this study, poor school performance was expected to have a stronger impact on the OHC population's risk of long-term NEET than on that of their non-OHC peers, as previous studies show that youth from OHC often have weak support networks (Höjer & Sjöblom, 2009; Greeson, 2013; Ejrnæs et al., 2011; Franzén et al., 2008; Kestilä et al., 2012), which are known to be important in labor market segments where non-formal qualifications are more decisive for employment (Breen & Jonsson, 2007). The OHC population was divided into study groups in the same way as in Study III, and was compared with same-aged peers without care experience within the countries.

As expected, the results showed that the proportion in long-term NEET was substantially higher among young adults from OHC as compared to their same-aged peers. About a fourth in Denmark and Sweden, and about a third in Finland, were NEET in the OHC population, as compared to 6–7% among their peers without care experience. When all background variables (i.e., sex and birth mother's education, social assistance, psychiatric care, and substance abuse) were adjusted for, the study showed that the excess risk of NEET was especially elevated among those with both OHC experience and poor school performance in all three countries. Compared to peers without OHC experience and poor school performance, the excess NEET risk was 11–14 percentage points for young OHC adults *without* poor school performance, and 32–34 percentage points for young adults from OHC *with* poor school performance.

All OHC sub-groups had a high prevalence of poor school performance and NEET. This includes the Early long-term group, in which individuals in average had entered care at 5–6 years of age and had been in care an average of 9–11 years during childhood. In Sweden, they even had the highest excess risks. In all three countries, those who were in care for less than a year at a young age (Early short) had the lowest risk of NEET among the OHC sub-groups.

They also had a lower prevalence of poor school performance, and those who had above low grades in primary school had almost no excess risk of NEET.

The linkage between the educational system and the labor market differs among the countries. For instance, Denmark has stronger educational stratification and weaker employment protection legislation than Sweden and Finland. However, evidence from general population studies suggests that these differences mainly apply to those who complete upper secondary education (Bäckman et al., 2015; Albæk et al., 2015). This was also supported by the results in this study, with the OHC population's adjusted risk of being NEET being similar across countries, although there was a tendency that poor school performance was more decisive for the risk of being NEET in Sweden while OHC experience was more decisive in Denmark, and in Finland it was in between.

Study V.

Educational Outcomes of Children from Long-term Experience of Foster Care: Does Foster Parents' Educational Attainment Matter?

Study V investigated intergenerational transmission of education in the foster care setting. To our knowledge, this has not been done previously in either a large sample or a full cohort study, in either international or Swedish studies, as data are typically lacking on foster family characteristics. In this study, censuses were used to link foster children in long-term care to the household where they lived during their primary school years. In the general population, parental education is known to be a strong and robust factor for children's educational outcomes (e.g., Breen & Goldthorpe, 2014; Hertz et al., 2007), and there is also an association between birth parents' educational level and their children's educational outcomes in the OHC population (Figure 15). It has also been hypothesized that there is a matching effect when foster children are placed in foster care i.e., that foster children whose parents have a higher education are placed with foster parents who also have a higher education. This was somewhat supported by analyses performed in connection with the final study (Figure 10). For these reasons, we conditioned on birth parents' education by creating a combined maternal education variable that separated the effect from that of the foster parents.

A number of analyses preceded this study. We performed an analysis similar to the adoption studies referred to in the theory chapter (Sacerdote, 2004; Björklund, Lindahl, & Plug, 2006), in which the effect of birth mother's educational level in the majority population was compared with the independent effects of birth mother's and foster mother's educational level among foster children. In these adoption studies, the influence from birth parents was argued to capture broad pre-birth factors, including genes and prenatal environment, while the influence from adoptive parents was argued to capture broad

post-birth factors, such as childhood environment. The influences are usually not as distinct in the foster care setting. In the study presented here, the foster children had stayed with their birth mothers up to six years before first entry into OHC, and may also have lived with their birth mother for some period of time during primary school years. Similar to the evidence from the adoption studies, the intergenerational transmission coefficient was weaker for foster mothers than for birth mothers (presented in Table A3 in Appendix). But contrary to the adoption studies, the total intergenerational transmission effect from birth mothers and foster mothers (the sum of the coefficients) were weaker than the effect from birth mothers in the majority population, which may indicate that the placement situation was influencing educational outcomes negatively

However, a combined maternal education variable was used in the final. We were searching for an educational gradient – a pattern – in foster children’s educational outcomes in regard to foster mothers’ educational attainment, where school performance measured their achievements at the comprehensive level while educational attainment measured their tendency to continue to higher education. While the results showed a weak gradient between foster mother’s educational level and foster children’s educational outcomes, the pattern was not consistent or robust. Our results for females and males differed, and the transmission effect was stronger among males than females on poor school performance in primary school, while the opposite was true for educational attainment (only primary education at age 26), whereby the transmission effect was stronger among females than males. This may be in line with females’ higher educational attainment in the overall population and previous studies indicate that boys benefit more than girls do from an advantageous home environment in terms of school performance – that is, GPA (Brenøe & Lundberg, 2018) – and that later educational choices are same-sex correlated; i.e., that the mother’s education is more important for daughters while the father’s education is more important for sons (Humlum, Nandrup, & Smith, 2019).

The strength of the study was that we were able to use foster family characteristics in a full cohort study, but this was limited to the census years. While we were able to control for a number of foster family characteristics (the full model is given in Table A2 in the Appendix), we did not know how long the foster children had lived in the foster family since the last census. The variable that provides information on where the foster child goes after placement was not included in the CWIR for the birth cohorts included in the study (see the section on the CWIR).

An important understanding from the results is that the construction of stable long-term care is done in retrospect. Upon placement, neither the parents (birth and foster) nor the child knew if the placement would remain stable. In addition to the weak gradient, the overall performance was also low in the study population; hence, the gradient appeared at a lower level as compared

to the general population. This is also visualized in Figures 11–14 in the section on educational patterns in the OHC population. All OHC groups, including those who were in OHC for most of their childhood, have substantially lower educational achievement and attainment than the general population. This was also supported by the Nordic studies (Studies II and V), in which all OHC groups were substantially disadvantaged in comparison to the general population. The conclusion from the results of the study was that living in a better educated foster family does not have a robust compensating effect in the foster family setting.

Discussion

The five individual studies in this thesis investigated different aspects of the transition through the educational system towards adult life among children and youth from OHC. The studies were framed in social stratification theory and their design relate to the status attainment model (Figure 17). The findings show that the OHC population was disadvantaged in both stages of the status attainment model: in the first stage by having lower chances of achieving an education; and in the second by being more disadvantaged in other domains of life when educational outcomes are poor. Furthermore, the intergenerational transmission of education was rather weak and inconsistent in the foster care setting; living in a foster family where the foster mother had a higher educational level was not as protective against poor educational outcomes as in the general population. The overall pattern of poor educational outcomes was similar in the three Nordic countries of Denmark, Finland, and Sweden.

The prevailing difficulty of separating the influence of pre-care factors from that of in-care factors was dealt with by comparing the OHC population to different comparison groups with similar socioeconomic backgrounds but without OHC experience, controlling for birth parents' characteristics, and dividing the OHC population into study groups in accordance with care history. The results suggest that the OHC population was more disadvantaged than the comparison groups and that birth parents' characteristics adjusted for some of the risk of poor school performance, but that a significant excess risk remained.

There were some differences in educational outcomes between the OHC sub-groups. Generally, those who had been in early short and in long-term care had lower risks of poor educational outcomes than those who had been in early intermediate and teen care. However, all OHC groups, including those who had spent most of their childhood in care, had a substantially higher prevalence of poor educational outcomes than their peers without OHC experience, and these patterns were stable across the time period covered. Still, an important remark is that the results in the thesis refer to the OHC population

as a group and according to register data. Even though certain adverse outcomes are more common among children and youth from OHC, even much more common, this does not mean that individuals with OHC experience are predetermined to develop these adverse outcomes (e.g., poor school performance). In the research field of children and youth in vulnerable situations, a general problem is balancing between detecting disadvantages in order to make a change and the risk of stigmatizing an entire group. This is indeed relevant regarding the OHC population.

Causality versus selection effects

Even though several measures were carried out in order to control for pre-care factors it was not possible, with accuracy, to separate the selection effect from the causal effect of OHC. The findings may support the importance of both in-care factors and pre-care factors. The comparison groups of individuals who experienced early in-home interventions, national adoptees, and substance misusers without OHC experience all had better educational outcomes than the OHC population. These groups were chosen because they had social background factors similar to those of the OHC population. However, the fact that they were not subjected to OHC may also indicate that their home environment was not as disadvantaged as the OHC population's to begin with. Results were adjusted for parental background factors, but these were only rough constructions that most likely do not capture the entire real-life variety of early childhood factors. Hence, some of the OHC population's excess risk (compared to the comparison groups) may still be due to their pre-care experiences rather than their in-care situation.

The interpretation of the differences between the OHC sub-groups in the Nordic comparative studies carries the same difficulties in separating the causal from selection effects. The Teen group had the highest risk of poor educational outcomes (and NEET in Study IV), but as they were subjected to OHC rather late, in adolescence (average age 15), the influence of in-care factors on school performance was limited. Furthermore, in the Teen group, the reason for OHC is most often related to the youth's own disruptive behavior, and an adverse development may already have started before they entered care. The other three sub-groups, who entered care before their teens, were divided into groups according to total time in care, i.e. the length of their exposure to in-care factors. This may also correlate with the degree of adverse home environment, with those who spent a long time in care having had a more adverse home environment (as they could not move back home) than those who spent only a short time in care. This was somewhat supported by the prevalence of maternal psychosocial problems in the Nordic comparative study on NEET (see Table 3 in Study IV).

Education is responsive

However, several considerations speak to an influence from in-care factors on educational outcomes among children and youth in care. First, it is unlikely that such high rates of poor school performance among children in care are predetermined. Many in the Long-term group had spent most of their childhood in OHC (Figure 7), and even though fetal or early childhood experiences might have resulted in an elevated prevalence of cognitive or behavior problems within the group, this does not automatically lead to school failure.

Evidence from studies of foreign-born adoptees suggests that a good and stable home environment has a compensating effect for weaker cognitive ability on school performance (Lindblad, Dalen, Rasmussen, Vinnerljung, & Hjern, 2009). Other studies have also shown that cognitive ability is responsive through stimulation, both among foster children in Sweden (e.g., Tideman et al., 2011), internationally among children from orphanages (e.g., Fox et al., 2011), and among adoptees (e.g., Duyme, Dumaret, & Tomkiewicz, 1999; Schiff et al., 1978). Furthermore, Study I was a continuation of a previous study on school performance among children from different social backgrounds, in which the results among males were adjusted for cognitive ability from tests upon military conscription. These results suggested that males from long-term care had significantly lower average grades in primary school, and lower chances of achieving an upper secondary education, compared to other males with similar cognitive test results (Vinnerljung et al., 2010). Several studies have found that knowledge gaps in school subjects rather than cognitive ability is a main factor behind children in OHC performing below their potential, and that educational support that helps them to fill these gaps increases their school performance (Tideman et al., 2011; Tordön et al., 2014; Clemens et al., 2018).

It is sometimes argued that the high prevalence of behavior problems and mental health problems among children in care explains the high rates of poor school performance within the group. However, the causal mechanisms are complex and go both ways. It is well known that behavior problems can cause poor school performance (Johnson et al., 2009), but poor school performance also affects children's behavior and well-being (Gustafsson et al., 2010). This is also supported by the promising results from recent testing of different school support programs aimed at children in care. This holds both for improvements in school performance (Gottfredson, Wilson, & Najaka, 2002; Harden, Brunton, Fletcher, & Oakley, 2009; Voisin & Neilands, 2010; Zingraff, Leiter, Johnsen, & Myers, 1994) and for positive side-effects these programs have had on children's self-esteem and strengthening of their relationships with their teachers, classmates, and foster parents (Tideman et al., 2011).

Instability and uncertainty in placements

OHC is by definition a move from the home of origin, but with the purpose of providing a better home environment for the child. However, instability and uncertainty of the living arrangements of children in care is a well-known problem (e.g., Utredningen om tvångsvård för barn och unga, 2015) that may certainly affect their ability to perform in school. Reunification with birth parents is promoted in Swedish child welfare, and the placement is reconsidered every six months (Socialstyrelsen, 2013a). For some children, this might result in moving back and forth between the home of origin and a foster home.

The CWIR does not allow for measuring actual instability in placements as the register does not hold information on individual foster homes or residential care homes. But rough measurements can be done by studying the number of placement sequences they have had, i.e. placements over a continuous time period in a certain type of placement. This shows that half of all children in long-term care (born in 1990–1995) have had three or more placement sequences by the time they age out of care (Socialstyrelsen, 2020b). This might have resulted in a number of school changes and potential knowledge gaps, due to e.g. different curricula and instructional settings, and new teachers (Fuglsang Olsen & de Montgomery, 2018; Pears, Kim, Buchanan, & Fisher, 2015). But even if the child is able to continue in the same school, frequent change of home environment and caregivers may also impair the academic progress as the child struggles with adjusting to a new environment (Berger et al., 2015; Clemens et al., 2018).

In the studies included in this thesis, *children in long-term care* was also a construction that was made in retrospect. The individuals concerned – i.e. the foster children, birth parents, foster parents, social network, and child welfare professionals – did not know whether that particular placement would be a long-term placement. Both instability and uncertainty will potentially weaken foster parents' ability to support and guide the foster child in the educational system, as well as the child's motivation to commit to the schooling. While evidence is sparse, studies suggest that caregiver involvement is often lower in foster family settings compared to birth family settings, and that several factors contribute to, e.g., instability in placements and lack of information, which make it more difficult to provide appropriate support (Pears et al., 2018; Beisse & Tyre, 2013; Munford & Sanders, 2016). One of few consistent factors associated with foster children's educational outcomes, according to a recent review by O'Higgins and colleagues (O'Higgins et al., 2017), was that of the caregivers' school involvement.

In studies on step-families, a less continuous history within the family is found to diminish the intergenerational exchange of resources, e.g. instrumental, emotional, and financial (Amato, 2005; Ganong & Coleman, 2006). The notion that the commitment may be weaker in the foster family setting than in regular families is supported by a Swedish study on interruptions in OHC,

which showed that divorce in foster families sometimes led to neither of the foster parents wanting to continue caring for the foster child; this held even when the foster child had spent many years in the foster family. Biological children in the foster family also served as a risk factor for disruption in placements, e.g. because the foster parents felt that their biological children needed additional support or attention. Conflicts between foster parents and birth parents formed another risk factor for disruption in care (Socialstyrelsen, 2012; Vinnerljung, Sallnäs, & Berlin, 2014).

Three-headed parenting

OHC is not only a matter of protecting children and youth; it is also intended to improve their future opportunities by compensating for adverse upbringing factors. In this regard, the foster family may be perceived as a hybrid between being a 'normal family' and a 'treatment method', whereby the foster parents are responsible for providing a good home environment, supporting the child's development, and ensuring that the child maintains a good relationship with his or her birth parents (Höjer, 2001).

Many parents recognize the difficulties involved in giving their children educational support, and the OHC context often comprises additional challenges whereby the involved parties (i.e., the birth parents, the foster parents, and the child welfare) share the mandate and responsibilities (Utredningen om tvångsvård för barn och unga, 2015; Järvinen & Tankred Luckow, 2020). For the birth parents, it is obviously difficult to support a child who lives in another family or in a residential care home. The birth parents have also been judged not to be equipped to take care of the child, and may feel inferior compared to the foster parents and the child welfare professionals (Höjer, 2009; Bryson, 2016), which may also affect their ability to guide and support him or her in schooling. Furthermore, if the child does not enjoy studying, it is easily understood why the birth parents do not engage in schoolwork during the time they spend with him or her.

The same goes for the foster parents, who may prioritize building a good relationship with the foster child without the negativity that could result from struggling with homework (e.g., Forsman, 2017). The foster parents may also have other obligations associated with supporting the foster child, e.g. keeping appointments with different professionals and maintaining contact with birth parents and child welfare services, which may take a great deal of energy (Höjer, 2001). For the foster child, it may be hard to adjust to the new environment and not knowing what the future will bring. The lack of information is known to be a concern for children in care that can cause anxiety and impaired well-being (Socialstyrelsen, 2013b). It is also suggested that a lack of trust between foster parents, birth parents, and foster children is a key component that impairs the transmission of resources, including educational support, in the OHC setting (McClung & Gayle, 2013).

Education is influential

The process of achieving education is both carried out at home and in school (Heckman, 2014). For children who are placed in long term care, a large part of this process is carried out in the foster family. However, there are several factors that might impair the educational process in the OHC setting and the findings in the individual studies suggest that additional support is needed to compensate for that. Sweden's educational system has a strong stratifying impact (Rudolphi, 2013; Breen, 2010), and without sufficient support early in the educational process, children in care are at risk of having any previous poor performance acting as a disadvantage that accumulates through the system.

Despite the low level of formal tracking in the educational system, previous performance serves as a form of informal tracking as it influences the motivation and ability to further one's academic achievement. Since admission to higher education is centralized and accessed by previous educational achievement, parents will put a great deal of effort into facilitating their children's educational achievement (e.g., Bach, 2014). This process continues over the life course and is usually cohesive, from pre-school skills in early childhood to support in higher education, resulting in an accumulation of advantages or disadvantages. The findings suggest that poor school performance in primary school had a great impact on future opportunities for children in care, both in achieving higher education (Studies I–II, IV–V) and in inflicting greater disadvantage in future life (Studies I, II, IV). At the end of primary school most of the educational sorting is already done (Rudolphi, 2013), and therefore the grades in primary school account for a great part of the effect of socioeconomic background factors on future outcomes (Vinnerljung et al., 2010).

However, the mediating potential of the Swedish educational system could also be used in favor of the OHC population. As social background is primarily mediated in the educational system, interventions targeting educational achievement are likely to have a significant impact on future opportunities (Rudolphi, 2013; Breen & Jonsson, 2007). But previous research suggests that such interventions need to be systemized and customized to the OHC population's specific situation, as general favorable factors seem to have no or weak effect, e.g. attending a high-achieving school (Berlin, 2012b) or living in a highly educated foster home (Study V).

This is also the case in arrangements meant to increase educational opportunities in the general population. Evidence shows that the adult educational system, constructed to increase adults' opportunities to re-enter education, is not used as frequently by young adults from OHC as by other groups (Vinnerljung et al., 2010). The results in Study II, among substance misusers in treatment, also showed that different types of vocational training in adulthood were less common in the OHC population. The Nordic comparative studies indicated that the differences in arrangement of vocational training across

countries did not affect the OHC population's risk of NEET, but might explain the OHC population's higher risk of not completing upper secondary education in Denmark (Study III). An apprenticeship system may disfavor young adults with weaker social networks as they have problems finding apprenticeships (Roth, 2014; Helland & Støren, 2006; Schmidt, 2010; Brahm, Euler, & Steingruber, 2014), which might explain the OHC population's risk of dropping out of upper secondary education in such a system (Daehlen, 2017).

Accelerated and compressed transition into adulthood

The school-to-work transition is seldom a straight path for young people in today's society which has resulted in an extended transition phase and prolonged parental dependence (Billari & Liefbroer, 2010; Buchmann & Kriesi, 2011; Schoon & Lyons-Amos, 2016; Settersten & Ray, 2010). However, many young people from long-term care have an accelerated and compressed transition into adulthood, without the amount of support peers who were brought up in their homes of origin usually have (Greenson, 2013; Ejrnæs et al., 2011; Franzén et al., 2008; Kestilä et al., 2012). Sweden does not yet have a systemized after-care program for care leavers, and there are no national statistics on what kind of support they usually receive. While they are in care they can apply for continued care until they finish upper secondary education. It is also stipulated that the need for support is to be assessed well in advance of exit from care (e.g., financial, housing, studies, or work), but there are no specifics on what support they are entitled to, or for how long (Socialstyrelsen 2012a; Storø et al., 2019). Both international and Swedish studies show that there is a gap between the needs of young people leaving care and the support they receive from the social services (Geiger & Beltran, 2017; Cameron et al., 2012; Höjer & Sjöblom, 2009; Martin & Jackson, 2002).

In educational theory, the choice to pursue higher education is sometimes described from the perspective of rational choice, whereby individuals weigh the costs and returns (real or perceived) against each other, implying that the cost for individuals from privileged backgrounds is low and the return is high while the reverse applies to individuals from less privileged backgrounds. The choice to continue to higher education also depends on the perceived likelihood of success in continued education (Breen & Jonsson 2005; Breen & Goldthorpe, 2014). For foster children, the cost of continuing to higher education might be too high and the returns too uncertain when there are no systemized care-leaving services and they have to rely on the general welfare service systems. The findings in the individual studies suggest that youths from OHC were considerably more disadvantaged by poor school performance and low educational attainment than other groups (Studies I, II, IV). Study IV suggested that the risk of NEET was slightly higher even for those in the OHC population without poor school performance in primary school; i.e., when their grades were above low.

For children in care there can be a strong desire to leave the child welfare system as soon as possible, which makes them less eager to apply for continued care in order to complete upper secondary school. If they want to continue their education later in life, at the upper secondary level or at higher levels, they are referred to the same general system as anyone else which, despite providing free education and favorable student loans, is often supplemented by additional support from parents. The welfare assistance system for adults is seldom a solution for students, as it is strict regarding who is entitled to assistance. Several studies have identified this lack of a systemized after-care program as a deficit in the Swedish child welfare system (e.g., Höjer & Sjöblom, 2011; SOU, 2015:71; Storø et al., 2019). However, studies of the after-care programs in the other Nordic countries (Frederiksen & Lausten, 2018; Paulsen, Höjer, & Melke, 2018) as well as the results from the Nordic comparative studies in this thesis (Studies III and IV) show that such programs are not sufficient by default. Their construction needs to be evaluated and well adapted to young people's circumstances in order to offer sufficient support (Stein, 2019; Häggman-Laitila, Salokekkilä, & Karki, 2018). The period of length that after-care is available and the type of support offered are likely decisive for the success of such programs.

Greater than average inputs

The increased importance of education in today's society makes for an influential factor that can be targeted by child welfare services and other relevant actors, in order to improve the opportunities for this group of young people. The OHC population is heterogeneous in terms of age and time in care, which is decisive for the design of possible support measures. About a third (born in 1980–1994) stayed in care for less than a year, while about half stayed up to five years and about a fifth stayed in long-term care, i.e. five years or more (Figure 3). Nonetheless, early assessment and targeted interventions are important for the best possible educational progress (e.g., Heckman, 2014).

The debate on reunification versus continuity and stability in care has been long-lived in Sweden. When the Social Service Act was introduced in the 1980s, reunification with the birth parents was the overriding goal, aimed at providing a comprehensive living situation for children in care. This was based on evidence from international research suggesting that maintaining parental contacts had a favorable impact on the development of children in care. In recent decades, however, it has been acknowledged that the strong reunification principle has also jeopardized the continuity and stability of care for many children, and some changes have been made in order to enforce the latter. The reconsideration of the placement every six months has been the most prevalent measure for emphasizing the reunification principle (Utredningen om tvångsvård för barn och unga, 2015), but new regulations has been established, stating that transfer of custody is to be considered when a child has

been in care for three years or longer. The issue of adoption in order to ensure continuity and stability for children in care has so far merely been the subject of a number of investigations; to date, no changes to the regulations in order to encourage adoption have been implemented. Still, transferring custody to foster parents as well as adoption are still rare in Sweden (Socialstyrelsen, 2014).

In universal welfare regimes like Sweden, it has been taken for granted that the general welfare systems will provide sufficient support to all children. However, evidence has shown that children who do not live continuously with their parents or caregivers are at risk of missing out on these comprehensive systems, such as the general health and dental care programs (Kling & Nilsson, 2010; McMahon et al., 2018; Randsalu & Laurell, 2017; Berlin et al., 2018). Swedish studies have also identified that child welfare services have not sufficiently monitored the educational situation of children in care (Vinnerljung, Öman, & Gunnarsson, 2005; Vinnerljung et al., 2010), or the after-care support provided by child welfare services (Höjer & Sjöblom, 2009; 2011; Storø et al., 2019). This has raised an awareness of the urgent need to improve the cooperation between relevant actors (Socialstyrelsen, 2018b) and to improve the child welfare system in order to ensure that children in OHC receive the same support other children do (e.g., SOU, 2015:71; Socialstyrelsen & Skolverket, 2013).

Conclusion and contribution

The aim of this thesis was to add knowledge on the prevalence, patterns, and consequences of educational outcomes among children and youth from OHC. The findings extend previous research on poor educational outcomes, and contribute to these findings: by covering the entire Swedish OHC population since the start of registration; by following the OHC population through the educational system; by comparing the OHC population with other comparison groups; by making a cross-country comparison of three Nordic countries; and by examining the influence of foster family factors on educational outcomes.

The thesis shows that the patterns of poor educational outcomes have remained stable over time, with poor educational outcomes being a disadvantage for the OHC population in the status attainment process, even in comparison with other groups with similar family backgrounds but without OHC experience. Furthermore, it shows that their high excess risk of adverse development makes them constitute a large share in general disadvantaged groups as adults, e.g. among substance misusers. In international comparison, the Nordic welfare regimes have been efficient in reducing inequality in general (e.g., Breen & Jonsson, 2007), but these findings suggest that they have not been successful in providing opportunities to the OHC population at a level comparable to that of their non-OHC peers.

Education is a main factor for upward social mobility, and can be used in the process of improving the OHC population's future opportunities. However, regardless of the reason for the high prevalence of poor educational outcomes among children and youth from OHC, adequate support is needed in order to ensure that this vulnerable group has the same educational opportunities other young people do (Vinnerljung et al., 2015). Furthermore, supportive measures should be carried out early in the educational career since previous school performance accumulates through the educational system (e.g., Heckman, 2014; Rudolphi, 2013). The studies in this thesis suggest that, even for children in stable long-term care in which the foster mothers were highly educated, additional support is needed. The conclusion from the studies can be summarized by a statement by Heath and colleagues (1994): "when 'average' educational inputs are given to children with 'above average' educational needs, they fail to make 'greater than average' educational progress".

Future research

There is clearly a need for more research on how to improve the educational opportunities for children and youth in OHC. On the positive side, an awareness of the high prevalence of poor educational outcomes has increased among relevant actors. A number of initiatives have been taken in recent years to improve the schooling situation for children in care through information and guidelines, e.g. on how to improve the transmission of information between schools (Socialstyrelsen, 2018b), and assessing the educational situation for children in care (Socialstyrelsen & Skolverket, 2013). It will be important to evaluate if these measures will have any impact by following the development of educational outcomes in the OHC population. However, there is an urgent need for efficient intervention programs aimed directly at improving children's cognitive development and school performance. The same goes for programs supporting and encouraging children in care to continue to higher education. This calls for a great deal of research on what type of interventions could be successfully implemented in the child welfare system on a regular basis. The problem of instability in placements and the lack of systemized after-care programs also call for further studies. Overall, this is a research field where many questions remain to be addressed.

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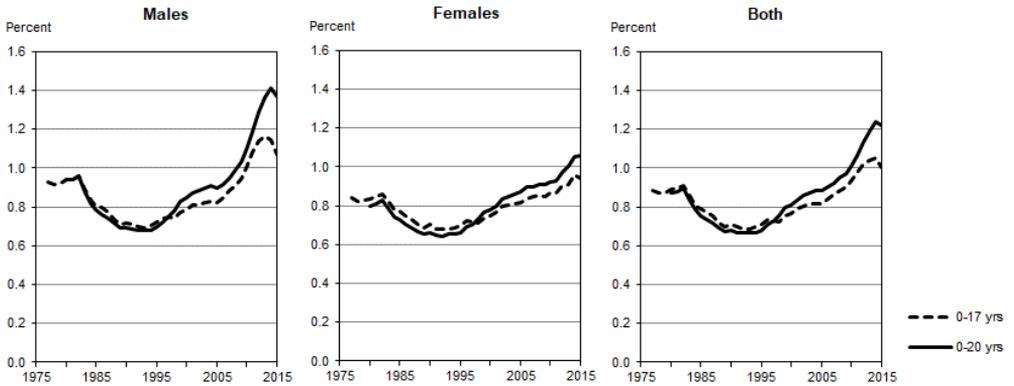
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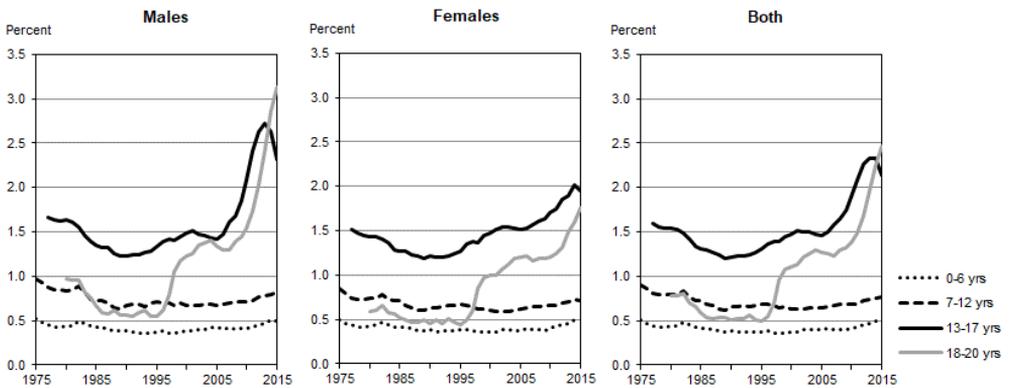
Appendix: Additional descriptive statistics

Figure A1. Proportion of children and adolescents in OHC at some time during a given calendar year. Swedish resident by age and sex during the period 1975–2015. All types of OHC included. Percent.



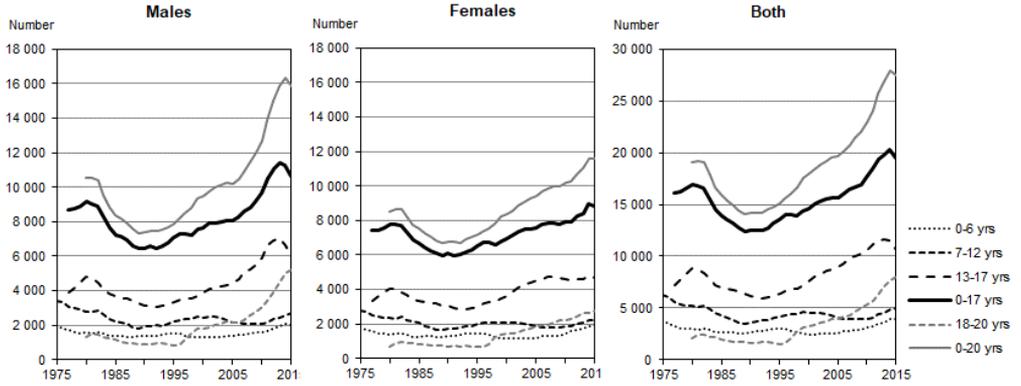
Source: Child Welfare Intervention Register, National Board of Health and Welfare.

Figure A2. Proportion of children and adolescents in OHC at some time during a given calendar year. Swedish resident by age and sex during the period 1975–2015. All types of OHC included. Percent.



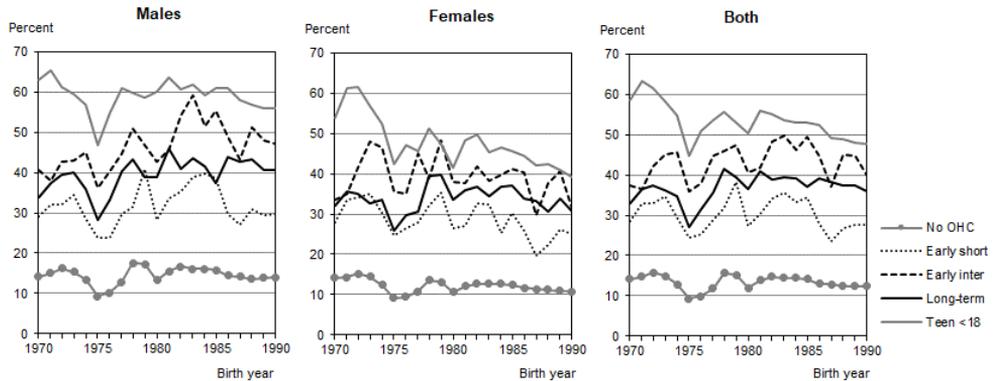
Source: Child Welfare Intervention Register, National Board of Health and Welfare.

Figure A3. Children and adolescents in OHC at some time during a given year, by age and sex during the period 1975–2015. Foster and residential care. Numbers.



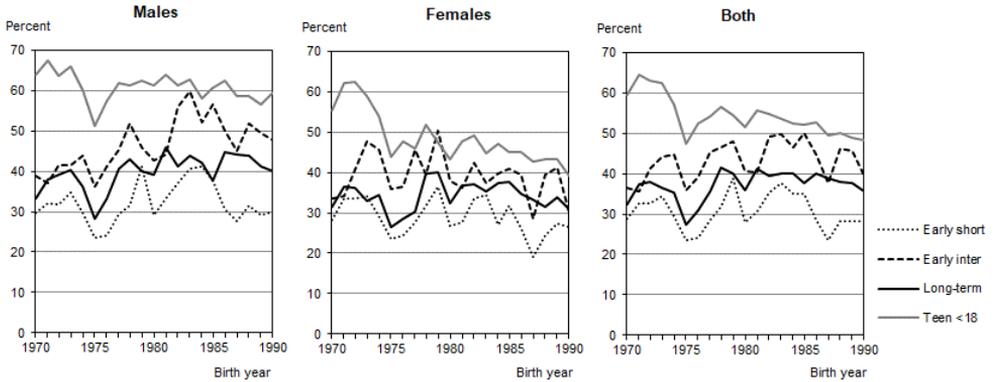
Source: Child Welfare Intervention Register, National Board of Health and Welfare.

Figure A4. Proportion with primary education (including missing information in the educational registry) as the highest completed educational level at age 25 by OHC experience, sex, and birth year. Percent.



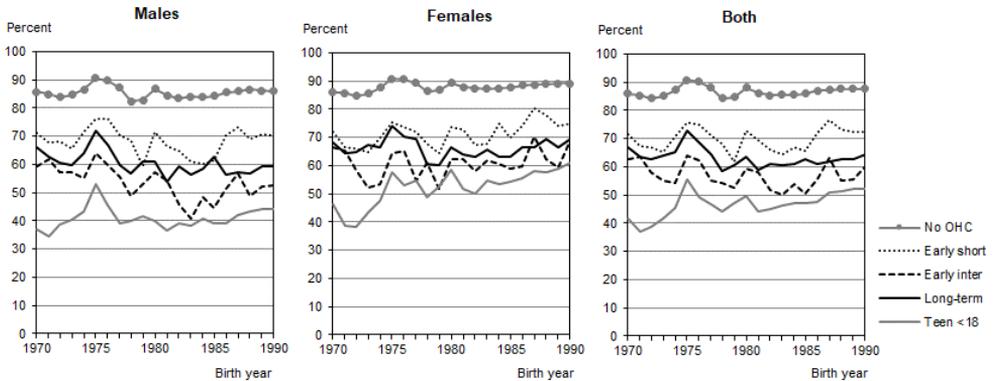
Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

Figure A5. Proportion with primary education (including missing information in the educational registry) as the highest completed educational level at age 25 among domestic-born by OHC experience, sex, and birth year. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

Figure A6. Proportion with at least some upper secondary education (including higher educational levels) at age 25 by OHC experience, sex, and birth year. Percent.



Sources: Child Welfare Intervention Register, National Board of Health and Welfare; and National Educational Register, Statistics Sweden.

Figure A7. Psychosocial problem outcomes in Study I. Prevalence in the total population and share with OHC experience within outcome groups. Percent.

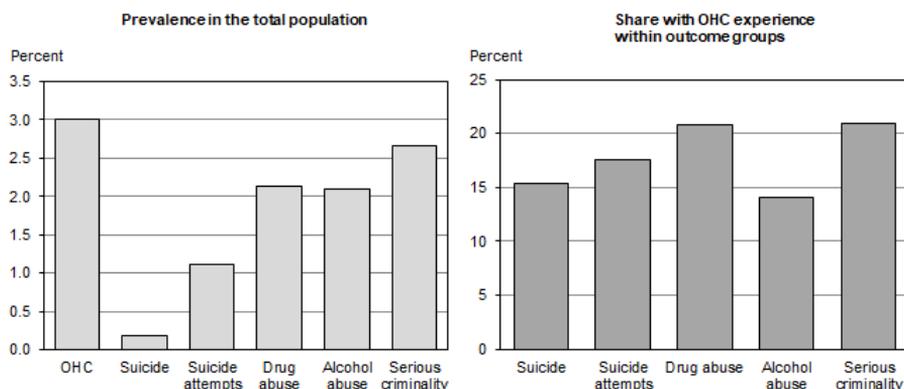


Table A1. The upbringing family with whom the child lived for most of his or her childhood. Percent.

Born in	Entire childhood with both birth parents	Majority with			Foster parents	Other	Total
		both birth parents	birth mother	birth father			
1900–1909	69.2	18.6	4.9	3.1	1.6	2.4	100.0
1910–1919	71.6	14.9	6.9	2.5	2.0	2.0	100.0
1920–1929	73.8	15.4	5.4	2.1	1.9	1.3	100.0
1930–1939	74.3	14.0	5.9	1.8	2.4	1.6	100.0
1940–1949	78.6	10.3	7.0	1.4	1.4	1.4	100.0
1950–1959	82.1	9.0	6.6	0.8	0.9	0.6	100.0
1960–1969	76.0	11.4	10.1	1.1	0.9	0.6	100.0

Source: Statistics Sweden, 1992.

Note on Table A1: Based on the survey on living conditions (ULF) in 1984–1985, in which close to 14,000 individuals born from 1900 to 1969 (aged 16–84 years at the time of the survey) participated, corresponding to a response rate of 83%.

Table A2. Logistic regression estimates for Poor school performance in primary school and Only primary education at age 26. The full models of Study V. Odds ratio (*p*-value).

	Poor school performance		Only primary education at age 26	
	Females	Males	Females	Males
Birth year	0.93(0.03)	1.06(0.10)	0.67(<.01)	0.74(<.01)
Age at first entry into OHC	0.90(0.10)	0.90(0.10)	0.95(0.49)	1.00(0.98)
Total time in OHC	0.995(0.27)	0.996(0.35)	1.00(0.62)	1.00(0.68)
GPA primary school ^d				
No or low			9.34(<.01)	9.99(<.01)
Low to average			1.86(<.01)	2.31(<.01)
Average to high			ref.	ref.
High			0.36(<.05)	<.01(0.98)
Combined maternal education ^a				
BM Missing information and FM:				
Primary	0.80(0.51)	1.18(0.55)	0.66(0.25)	1.15(0.68)
Upper Secondary	1.27(0.41)	1.10(0.73)	1.38(0.33)	1.15(0.66)
Post-secondary	0.93(0.86)	1.77(0.20)	2.37(0.08)	1.48(0.45)
BM Primary and FM:				
Primary	1.18(0.46)	1.84(0.01)	1.49(0.14)	1.00(0.98)
Upper Secondary	1.14(0.54)	1.62(0.03)	1.13(0.64)	0.88(0.60)
Post-secondary	1.15(0.62)	1.42(0.21)	0.85(0.62)	1.02(0.96)
BM Upper Secondary and FM:				
Primary	0.86(0.56)	1.54(0.07)	1.34(0.32)	1.10(0.72)
Upper Secondary	ref.	ref.	ref.	ref.
Post-secondary	0.56(0.08)	1.00(0.99)	0.97(0.92)	1.74(0.11)
BM Post-secondary and FM:				
Primary	0.22(0.18)	0.44(0.36)	0.60(0.59)	0.69(0.71)
Upper Secondary	0.16(0.08)	0.40(0.14)	0.97(0.96)	0.81(0.74)
Post-secondary	0.56(0.50)	0.27(0.06)	0.21(0.17)	0.30(0.12)
Foster family household				
Household size ^b	1.08(0.12)	0.98(0.66)	1.09(0.18)	1.01(0.81)
Two foster parents ^c	0.92(0.63)	0.54(<.01)	0.98(0.93)	1.19(0.42)
Kinship care	0.82(0.30)	0.73(0.10)	0.88(0.56)	1.08(0.71)
Adoption after care	0.54(<.01)	0.58(<.01)	0.76(0.25)	0.63(0.03)
Foster mother (FM)				
Born abroad	1.23(0.36)	0.98(0.91)	1.30(0.32)	0.91(0.71)
Age	1.00(0.73)	1.00(0.79)	1.00(0.89)	0.99(0.62)
Birth mother (BM)				
Born abroad	0.72(0.07)	0.82(0.26)	0.94(0.78)	1.52(0.04)
Age	0.98(0.03)	0.99(0.55)	0.98(0.08)	0.98(0.09)
Substance abuse	1.07(0.61)	1.11(0.44)	0.92(0.61)	1.02(0.92)
Psychiatric care	0.85(0.23)	0.78(0.07)	1.10(0.53)	1.38(0.03)
Total number (N)	1,041	1,069	1,011	1,034

a) Highest level 1990-2005. b) Excl. foster parents. c) In both censuses. d) Grade point average (GPA) last year in primary school. Reference category (OR = 1).

Table A3. Study V: Grade point average (GPA) and educational attainment level at age 26 by birth mother's (BM's) and foster mother's (FM's) educational attainment level. OLS regression coefficients. Separate models for females and males, and for study population and majority population (not placed in care at any time during upbringing). All models adjusted for study subject's birth cohort. Individuals born in 1972–1978.

	Model 1		Model 2		Model 3	
	Females	Males	Females	Males	Females	Males
GPA						
<i>Majority population</i>						
BM's educational level	0.281	0.303				
<i>Study population</i>						
BM's educational level	0.069	0.143			0.067	0.131
FM's educational level			0.053	0.120	0.052	0.110
Sum of estimates					0.119	0.241
FM's % of sum*					44%	46%
Educational attainment at age 26**						
<i>Majority population</i>						
BM's educational level	0.515	0.489				
<i>Study population</i>						
BM's educational level	0.142	0.135			0.141	0.128
FM's educational level			0.087	0.091	0.086	0.084
Sum of estimates					0.227	0.212
FM's % of sum*					38%	40%

Individuals with missing values were excluded from the analysis. * Percent of total maternal effects calculated as $b_2/(b_1+b_2)$, where b_1 = OLS estimate for BM's educational attainment and b_2 = OLS estimate for FM's educational attainment. ** In the study population, 24 boys/men (1102-1078) and 18 girls/women (1065-1047) were excluded from the analysis as they died before the age of 26. Majority population excluding individuals who immigrated after age 7 or died before age 27 (as in the study population).

Note on Table A3: Linear regression was used to analyze the separate effect of birth mother's and foster mother's educational attainment. In the analysis of the separate effect, maternal education was treated as a 'continuous variable' from 1 to 3 (primary, upper secondary, tertiary/post-secondary). The table presents the effect of birth mother's educational level in the majority population as compared to the effects of birth mother's and foster mother's educational level among foster children (the study population in Study V), in a similar fashion to the adoption studies referred to in the introduction and summary of Study V (Sacerdote, 2004; Björklund, Lindahl & Plug, 2006). The estimates were unadjusted (models without control variables). Similar to the evidence from the adoption studies, the intergenerational transmission coefficient was weaker for foster mothers than for birth mothers. But in contrast to the adoption studies, the intergenerational transmission effect was weaker among foster children than among their majority population peers, even when the effects

from both birth mothers and foster mothers were taken together (the sum of the estimates). The difference between the birth mother and foster mother coefficients were smaller for GPA than for post-secondary education at age 26, and the intergenerational transmission effect on GPA (of both birth and foster mother) appeared to be stronger among male than female foster children.