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Child welfare clients and educational transitions

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ABSTRACT

Despite longstanding knowledge about child welfare clients' educational disadvantage, we know less about the individuals' progress through the educational system. Based on Norwegian data, this study examined educational transitions following compulsory school and the first three years of upper secondary school, which correspond approximately to the transition following middle school/junior high school to the first years of high school in the US. It is argued that in examining educational success in the child welfare population it is necessary to analyse whether child welfare clients follow the academic or vocational track. In addition, the degree to which educational transitions are related to gender, school performance, and parental education was examined. Child welfare clients' educational transitions were compared with those of a comparison sample from the general population. The analyses show that after completing compulsory school, child welfare clients most often begin in the vocational track and that they often drop out of school. This tendency is largely related to low school performance and low parental education. In addition, child welfare clients' successful transitions are somewhat lower in the vocational than in the academic track and decrease during upper secondary school.

KEYWORDS

Education/Training/Supervision, Adolescence, Child Care, Sociology

INTRODUCTION

An essential condition for child welfare clients' future prospects is formal qualification through the school system. However, research over several decades from many countries has shown a high educational disadvantage among the child welfare population. Compared with the general population, child welfare recipients tend to perform poorly in school (Berlin *et al.*, 2011; Iversen *et al.*, 2010; McClung & Gayle, 2010), and relatively few obtain higher education degrees (Cheung & Heath, 1994; Daehlen, 2015; Jackson & Cameron, 2011). Many also lack a high school diploma or an equivalent upper secondary education (Courtney & Dworsky, 2006; Vinnerljung *et al.*, 2005).

Child welfare clients' lack of educational success has been linked to poor school performance (Forsman & Vinnerljung, 2012; McClung & Gayle, 2010), but recent findings show that school performance alone cannot explain their disparate upper secondary school

completion rates (i.e., education that corresponds to a high school diploma in the US). In Norway, completion rates for this population are lower than among their peers with the same school performance records. Of the two Norwegian upper secondary school tracks, this holds particularly true for students in the vocational track but less so in the academic track (Daehlen, 2015). However, we do not know when the challenges in vocational upper secondary school are most significant for child welfare clients. Is it the transition from lower secondary to upper secondary school at the age of 16 (i.e. similar to the transition from middle school/junior high school to high school in the US)? Or are there more difficult challenges later during upper secondary school? This article examines child welfare clients' transition from compulsory to upper secondary school and their progress during upper secondary school within both the vocational and academic tracks.

The second aim is to examine the characteristics related to successful transitions from one school year to the next. Being in the child welfare system is strongly linked with low social class background (Berridge, 2007), which social stratification researchers have long shown explains differences in educational attainment (Jackson, 2013). While lower-social-class background is related to poorer school performance and educational attainment, children from families with high-social-class backgrounds tend to perform better in school and are more likely to continue their education. Although a few studies have taken into account the influence of social class background on educational disadvantage in the child welfare population (Daehlen, 2015; Vinnerljung *et al.*, 2008; Vinnerljung *et al.*, 2005), the majority have been, "... written from a social care perspective, taking no account of educational or sociological evidence or theoretical insights which are relevant to the care population" (Jackson & Cameron, 2011: 35). Thus, parents' educational level has been taken into account in analysing child welfare clients' educational transitions in this study.

Furthermore, there is a higher proportion of boys than girls in the child welfare system (Backe-Hansen *et al.*, 2014), and boys are also more likely to choose the vocational track (Statistics Norway, 2014b). For that reason, gender is included in these analyses. However, the influence of gender on the choice of educational track in upper secondary school is largely found to be mediated by school performance (Markussen, 2010b). In addition, research over the last several decades has shown that children from lower social classes perform worse in school, which may partly explain why these children are less likely to continue their education (Jackson, 2013). In other words, school performance may substantially mediate the

association between social background factors and gender and educational outcomes. Thus, school grade information is also included in these analyses.

Data for these analyses represent the entire child welfare client population completing compulsory school between 2006 and 2010 (i.e., they were born during 1990–1994). In addition, data from a representative sample from the same birth cohorts who had no experience in the child welfare system were included for comparison.

The remainder of the article is organised as follows; it starts out with an overview of the child welfare population enrolled in the Norwegian educational system. Furthermore, previous research will briefly be reviewed before the methods and result of the current study will be presented. Finally, the article ends with a summary and discussion of the implications of the analyses presented.

The Norwegian context

In Norway, almost four per cent of children younger than 19 years receive welfare benefits. Eighty-three per cent of these receive assistance in their home, while 17 per cent receive care measures (i.e., they are placed in a foster home or institution based on the issue of a care order) (Backe-Hansen *et al.*, 2014).

In Norway, as in most European countries, the upper secondary school system is divided into academic and vocational tracks. The academic track prepares students for higher education, while the vocational track includes an apprenticeship and prepares students to enter the labour market. Unlike many countries, the Norwegian tracks begin relatively late, at the transition from lower secondary to upper secondary school when students are 16 years old. At this time, they have completed 10 years of compulsory school (seven years of primary school and three years of lower secondary school, which is similar to elementary school and middle school or junior high school in the US, respectively). No student fails compulsory school, and all students have the right to attend upper secondary school free of charge. In addition, students can apply for financial support during education. The financial support can be given as grants and/or loans and depends on the parents' income and assets. These rights are general and not targeted towards child welfare clients. Child welfare clients living in foster homes or institutions are eligible for grants/loans according to specific rules. Students apply for a school placement based on their compulsory school grades, and about 97 per cent proceed directly from lower to upper secondary school (Statistics Norway, 2014a). The Norwegian educational system provides alternative routes in upper secondary school for students with

particular school-related problems (both child welfare clients and other youths). In this study, these students are excluded from the analyses.

About half of students enrol in vocational studies, and the other half choose the academic track (Statistics Norway, 2014a). The academic track lasts three years, while the vocational track includes two years of classes and two years of apprenticeship. However, in lieu of the two-year apprenticeship, vocational students may take one year of supplementary study and pass exams to qualify for entry into higher education.

Successful educational transitions

Educational transition research has been carried out mainly within the social stratification research tradition. This tradition regards social inequality in educational attainment as a result of the higher rate of successful transition among students from a higher-social-class background. In addition, this tradition has shown that social origin has its strongest effect during early school transitions and a lesser impact during subsequent transitions leading to a higher educational diploma (Mare, 1980; Shavit & Blossfeld, 1993). The majority of research has focused on educational transitions from upper secondary to the tertiary level, but some studies have included the choice of educational track in secondary school (Breen & Jonsson, 2000; Neugebauer & Schindler, 2012; Reisel, 2011). Previous studies on patterns of educational transitions have predominantly examined the importance of class origin, but as Breen & Jonsson argue, "... inequalities based on gender, ethnicity, or other principles are obvious alternatives" (Breen & Jonsson, 2000: 771).

Studies on child welfare clients' educational attainment

A vast body of research has shown that child welfare clients fall behind in school and that few achieve good qualifications. Some quantitative studies have addressed educational disadvantage within the child welfare population (Cheung & Heath, 1994; Courtney & Dworsky, 2006; Vinnerljung *et al.*, 2005), but the majority have been qualitative or based on very small samples (Frederick & Goddard, 2010; Harker *et al.*, 2003; Hedin *et al.*, 2011). There have been a number of explanations for child welfare clients' educational disadvantage, which Iversen *et al.* (2010) divided into three groups: low priority and expectations among social workers, lack of resources in the family environment, and the child's own behavioural problems.

However, scholars have argued that the research in this area has taken little account of the sociological perspective (Berridge, 2007; Jackson & Cameron, 2011). This is surprising, given that families with low-social-class background are over-represented in the child welfare system and given that social stratification research has highlighted this as the most important factor in explaining education inequality. Furthermore, students from less advantaged backgrounds or who are academically weak are more likely to enrol in the vocational track (Shavit & Müller, 2000). To my knowledge, no study has examined educational transitions in the child welfare population and incorporated family social class background.

THE CURRENT STUDY

In this study, the concept of child welfare clients comprises all children/youths in child welfare services and not only those who have been placed outside home. Children investigated by the child welfare service are not included if no measures in-home or out-home for at least one year were implemented.

This study has compared educational transitions in the child welfare and general populations in terms of parental educational level. In addition, information about school performances has been included. Consequently, child welfare clients were compared with their peers who had similar academic competence and family educational resources. Choice of educational track in Norwegian upper secondary schools is divided by gender because of a higher proportion of girls choosing the academic track and boys choosing the vocational track. Because boys are somewhat over-represented in the child welfare population, gender was also included in these analyses.

Based on the child welfare clients' characteristics (low-social-class background, low school performances and higher proportion of boys) it was hypothesised that child welfare clients would have higher enrolment in the vocational track compared with their peers. The analyses examined whether enrolment in the vocational and academic tracks and subsequent successful transitions differed between child welfare clients and their peers after adjusting for educational resources in the birth family (parental education level), school performance and gender.

Data

Data were obtained from Statistics Norway public registers and include five cohorts of child welfare clients who finished compulsory school between 2006 and 2010 (i.e., they were predominantly born during 1990–1994). The child welfare clients in this population study received assistance during at least one year from 1993 to 2009. Information about many years total the child had been in the system, the age(s) at which they received assistance and the type of assistance that they received were unavailable. However, we know that the vast majority (83 per cent) of Norwegian child welfare clients remain with their birth families while receiving assistance; the average age when first receiving assistance is around the age of eight (note that this applies to Norwegian-born children of Norwegian-born parents—this age is lower among those of minority background); and they receive assistance for an average of about four years (Backe-Hansen *et al.*, 2014). Further detail about the type and length of assistance and the ages at which assistance was provided should be considered in future studies.

The data also included a comparison sample of five cohorts from the general population who likewise completed compulsory school during 2006–2010. In this comparison sample, somewhat more boys than girls were selected to match the higher proportion of boys in the child welfare population.

Dependent variables

Based on information about birth year and enrolment in upper secondary school, three dependent variables were constructed: t1 = transition from compulsory school to the first year of upper secondary school, t2 = transition from the first year to second year of upper secondary school, and t3 = transition from the second to third year of upper secondary school. At each year, the data set included a six-digit number for each student (measured in October of each school year). These numbers contained information about the type of education (nine different vocational programs and three different academic programs) and whether the student was in his/her first, second or third year. Variable t1 measured the transition from compulsory school where 1 = transition to the first year in the vocational track, 2 = transition to the first year in the academic track, and 0 = not in such education. Variables t2 and t3 each had two possible outcomes. For t2, 1 = transition to the second school year and 0 = no transition to the second school year. For t3, 1 = transition to the third school year and 0 = no transition to the third school year.

About 2 500 students were registered as having an alternative route in upper secondary school. Child welfare clients are over-represented in this alternative route (about 82 per cent are child welfare clients). Because the transition from one school year to another differed within this alternative route, these students were excluded from analyses.

Independent variables

Child welfare clients. The concept of child welfare clients comprises all children/youths in child welfare services and not only those who have been placed outside home (e.g. also children/youths living at home receiving child welfare support) and their educational transitions were compared with a comparison sample from the majority population without child welfare experience. The variables was dummy coded, 0 = majority sample and 1 = child welfare clients.

Gender. Gender was dummy coded, based on 0 = girl and 1 = boy.

Parental education level. Parental education was the highest level attained by either parent. Five dummy variables were constructed, with 1 = lower secondary school (or less), 2 = upper secondary school (academic or vocational), 3 = higher education – short (bachelor level), 4 = higher education – long (master level) and 5 = unknown parental education level.

School performance. School performance was represented by students' final grades in compulsory school. Students earned grades in 13 subjects (three grades in Norwegian, two grades in English and one grade in each of Maths, Social Studies, Natural Science, Christian and Other Religious and Ethical Education, Music, Home Economics, Art and Crafts, and Physical Education). Grades are on a six-point scale from 1 = lowest to 6 = highest. A grade variable was constructed measuring the means of all 13 grades, and four dummy variables were constructed. In order to separate low and high academic achievement, the mean grade distribution in the comparison sample was used to code variables with 1 = very low grades (from 1.00 to 3.54), 2 = low grades (from 3.54 to 4.15), 3 = high grades (4.15 to 4.69) and 4 = very high grades (4.69 to 6.00). However, not all students received grades in all subjects. If grade information was missing for some subjects, the mean grades were constructed on the remaining grades. However, if grade information was missing for more than half of the subjects, no mean grade variable was constructed. The rationale for this is that these students' school placement was guided by discretion rather than their grades, as specified by the Norwegian Education Act. Because their application process for upper secondary school differed from the normal procedures, it seemed reasonable to assume that their educational

transition was guided by conditions other than school grades alone. These students are identified in a separate 'missing' category.

Statistical methods

Results are presented first as frequencies. Table 1 and figure 1 show educational transition rates as percentages of the child welfare population and the general sample. Table 1 also presents descriptive statistics. In examining educational transition from compulsory to upper secondary school in the child welfare population and the general sample adjusted for gender, parental education level and school performances, multinomial logistic regression models were estimated (table 2). In the analyses of successful transitions during upper secondary school (t1 to t2 and t2 to t3), binary logistic regression models were estimated. In these analyses (table 2 and table 3), the year at which compulsory school was completed was included as a control for any differences in the relation between educational transitions and year of completed education. These results are not presented in the tables but are available upon request. To avoid problems with unobserved heterogeneity between the models (Mood, 2010), results from the multinomial logistic regression models were estimated as average marginal effects (AME). Wald tests were conducted to analyse whether the estimates were statistically different from zero.

RESULTS

In table 1, transition rates at t1, t2 and t3 in the child welfare population and the comparison sample are shown, along with descriptive statistics for all independent variables.

Table 1 about here

Table 1 shows that at each transition point, the drop-out rate was higher in the child welfare population compared with the comparison sample. While four per cent of the general sample did not enrol in upper secondary school in the same year that they completed compulsory school, this value was almost 12 per cent for the child welfare clients. Furthermore, the drop-out rates were higher within the child welfare population compared with the comparison sample at each subsequent transition point (the cumulative drop-out rate at t2 increased to 14 and 41 per cent in the general sample and child welfare population, respectively; at t3, these values were 23 and 60 per cent, respectively). In addition, child welfare clients enrolled in the vocational track more often than in the academic track

compared with the general sample. At t1, 66 and 45 per cent of the child welfare clients and general peers, respectively, enrolled in the vocational track after compulsory school.

About one in four child welfare clients had parents with lower secondary education or less, while this was true for fewer than one in 10 in the general sample. The proportion of children from families with upper secondary school as their highest educational level was 47 and 44 per cent in the child welfare population and the comparison sample, respectively. Consequently, a larger portion of the comparison sample came from families with a higher educational level than in the child welfare population (46 and 21 per cent, respectively), indicating the importance of adjusting for parental education in analyses. There were small differences in gender composition between the child welfare population and the comparison sample. This was a result of Statistics Norway sampling a higher proportion of boys for the comparison group to match the child welfare population. Nevertheless, gender was included in the analyses.

Child welfare clients' school performance was lower than that of their peers. While 55 per cent of the child welfare clients were categorised as what has been termed very low grades, this was true for 23 per cent in the comparison sample. Correspondingly, the proportions with higher grades are lower in the child welfare population compared with the general sample. The proportion with missing information (i.e., at least half of the grades missing) was almost three times higher in the child welfare population.

Educational transitions from compulsory school to and during upper secondary school

Figure 1 shows a descriptive flowchart of transitions from lower to upper secondary school and between the first three years of upper secondary school. At t1, 11 per cent of the child welfare clients left school compared with four per cent in the general sample (also shown in table 1). Figure 1 shows that one-third of the child welfare clients who made the first (t1) transition dropped out at t2, a rate three times higher than at the first transition point. In the comparison sample, one-tenth dropped out at t2, a rate 2.5 times higher than at t1. At t3, one-third of the child welfare clients dropped out compared with 11 per cent in the general sample. Consequently, the drop-out rate in the child welfare population was higher at each transition point compared with the general sample.

Figure 1 about here

Drop-out was higher among those who began at the vocational track in both the child welfare population and the general sample. In the child welfare population, 37 per cent of the vocational students dropped out at t2, and almost half (42 per cent) of those who made the t2 transition dropped out at t3. The drop-out rates at t2 and t3 in the comparison sample in the vocational track were lower (14 and 21 per cent, respectively). However, the drop-out rate in the comparison sample at t3 was somewhat higher than at t2 relative to the drop-out rate at these transition points in the child welfare population (an increase from 14 to 21 per cent compared with an increase from 37 to 42 per cent in the general sample and the child welfare population, respectively).

Exploring educational transition to upper secondary school

The results to this point indicate that successful educational transitions in the child welfare population are dependent on which track they attended. As shown in previous studies (see e.g. Markussen, 2010a) and in figure 1, the general drop-out rate was much higher in the vocational than the academic track. Because child welfare clients went into the vocational track more often, it is not surprising that their drop-out rate was higher compared with their comparison peers'. The next question was whether this difference could be explained by child welfare clients being over-represented among those with characteristics related to drop-out, such as low-social-class origin, low school grades and being a boy. This is first examined in the transition from compulsory school to upper secondary school (t1).

Table 2 about here

Table 2 shows the average marginal effects of being a child welfare client on the probability of starting in the vocational or academic track relative to dropping out of school (the reference category) after controlling for grades, gender and parental education. When comparing the two groups with the same background characteristics, child welfare clients were only two percentage points more likely to enrol in the vocational track and only four percentage points less likely to enrol in the academic track relative to dropping out of school. Thus, adjusting for factors that have been emphasised in the sociological literature as being important for explaining educational inequality, such as family resources (here measured by parental educational level but also grades), child welfare clients and their general peers are more alike. This may largely explain why child welfare clients drop out of school more often

after compulsory school and why those who continue their education more often choose the vocational track.

Grades remain an influential factor on the students' transitions after compulsory school. The higher their grades, the lower their probability of starting on the vocational track and the higher their probability of starting on the academic track relative to dropping out. Those with very high grades in compulsory school had a 30 percentage points lower probability of starting on the vocational track compared with those with low grades (grade category as reference) and a 29 percentage points higher probability of starting on the academic track. Students who had very low grades had a 16 percentage points higher probability of starting on the vocational track and a 22 percentage points lower probability of starting on the academic track. The relations between grades and the probability of transitioning from compulsory school to the vocational track, the academic track or leaving school are shown in figure 2.

Figure 2 about here

Figure 2 shows the transition rates for boys from families with lower secondary school as the highest educational level achieved. The higher the grades, the higher their probability of enrolling in the academic track and the lower their probability of enrolling in the vocational track and dropping out of school. However, even after adjusting for grades, male child welfare clients from families with lower secondary school as the highest educational level achieved, tended to start less often in the academic track than their general peers from families with same parental education level (and consequently had a somewhat higher tendency of dropping out and/or enrolling in the vocational track). Still, the more substantial difference in drop-out or enrolling in the vocational or academic track for these boys was explained by grades.

Furthermore, transition from compulsory school also differed based on family background. The higher the parental education level, the less likely the student was to start the vocational track and the more likely to enrol in the academic track relative to the baseline category, which was dropping out of school. One exception was among students from families with upper secondary school education compared with those from families with lower secondary school education (the reference category). While there was no difference in the probability of starting in the academic track between these two groups of students, students from families with upper secondary school had a higher probability of enrolling in

the vocational track compared to students from families with lower secondary school. The average marginal effect of ‘unknown parental education’ was negative and relatively substantial for the probability of starting in the vocational track (-.201). Compared with the average marginal effect on the probability of starting in the academic track, this result indicates that a substantial portion of these young people dropped out of school.

The results show no significant differences in girls’ and boys’ transition from compulsory school.

Exploring educational transition during upper secondary school

The next aim was to examine the degree to which child welfare clients’ subsequent transitions (transition to t2 and transition to t3) were related to their background characteristics. Table 3 shows the results of four binary logistic regression models. The dependent variable in each model was having transitioned or not to the next school year. The reference was not transitioning to the next school year.

In model 1a, the transition to t2 among students who started on the vocational track after compulsory school was examined. In model 1b, the transition to t2 among students who started on the academic track at t1 was examined.

When comparing child welfare clients to their general peers with the same background characteristics, the child welfare clients were less likely to transfer to t2. Child welfare clients were 15 percentage points less likely to transition to the second school year in vocational education compared with their general peers even after adjusting for grades, gender and parental educational level. Among child welfare clients who started the academic track after compulsory school, the probability of transition to the next school year was eight percentage points lower than in the general population.

In model 2a, the transition to t3 among students who were in the vocational track at t2 was examined. In model 2b, the transition to t3 among students who were in the academic track at t2 was examined.

From t2 to t3, child welfare clients had a lower probability of transition (12 and four percentage points lower than the general population in the vocational and academic tracks, respectively). Differences in transition rates for child welfare clients and in the general sample are shown in figure 3. The illustration is estimated for boys with very low grades who originated from families with lower secondary education as the highest educational level.

Figure 3

Figure 3 shows that the probability of a successful transition is higher in the general sample than in the child welfare population when comparing students with the same background characteristics. This is different from the pattern in figure 2, which showed small differences in transition rates between child welfare clients and general peers after adjusting for grades, parental educational level and gender. Figure 3 illustrates that adjusting for factors highlighted by sociologists cannot alone explain the differences between groups in the vocational track on educational transitions to t2, or particularly to t3. Child welfare clients made the transition to the next school year somewhat less often compared with the general sample with the same background characteristics (parental educational level, grades and gender). The most substantial difference in successful transition between child welfare clients and their general peers in the vocational track was from t2 to t3. While 68 per cent of the majority boys with very low school grades who were from a family with lower secondary education made the transition from the second to third vocational year, 53 per cent of the child welfare clients with the same characteristics did so.

Grades remained the most influential factor of the background characteristics in table 3. The lower the grades, the lower the probability of transitioning to t2 or to t3. For instance, vocational students with very low grades had 18 percentage points lower probability of transitioning to the second school year than those with low grades. The relation between grades and transition rates was even stronger in the next school year (20 percentage points lower for students with very low grades compared with those with low grades). Grades also remained an influential factor on transition in the academic track. Comparing the relation between successful transitions and parental education across the models in table 2 and table 3, we see that the influence of parental education decreased from table 2 to table 3 and was of less importance in the academic track at t3.

DISCUSSION AND CONCLUSION

Child welfare clients' educational disadvantage has been documented for many years and in many countries. However, one limitation of these studies has been a lack of review of child welfare clients' transitional progress through the education system. Regarding the goal of improving child welfare clients' educational records, it is necessary to identify the transition points when child welfare clients are at risk. Moreover, it is important to identify factors both

positively and negatively related to educational success. In Norway, the first time point when students are segregated is relatively late—at the transition from compulsory school to upper secondary school. An important and novel contribution of this study is that it has documented that the most significant difference between child welfare clients and their general peers' successful progress is not in the transition from compulsory to upper secondary school but rather the subsequent transitions.

An additional, important contribution of this study is that some of the "... educational and sociological evidence or theoretical insights which are relevant to the care population" (Jackson & Cameron, 2011: 35) when examining factors that may be related to educational success in the child welfare population has been taken into account. The students' grades from compulsory school were highly related to successful educational transitions. Differences in school grades are most certainly related to social class background. Still, the results show that parental education level also has a unique impact on child welfare clients' successful educational transitions.

After adjusting for background characteristics and consequently comparing child welfare clients' educational transitions to those of their general peers who are alike in their family educational resources, academic skills and gender, there were small differences between groups on their transitions from compulsory school to the vocational track, the academic or dropping out. Consequently, the differences in transition between child welfare clients and the general sample may be explained by differences in these background characteristics. However, these characteristics did not explain the subsequent transitions. Child welfare clients' higher drop-out rates from the first to the second year and from the second to the third year in upper secondary school could not be exclusively explained by child welfare clients performing worse in school and originating from families with lower educational level. The most substantial difference in successful transition between child welfare clients and their general peers was in the vocational track from the second school year to the third year.

Some limitations to the study should be noted. First, child welfare clients enrolled in the vocational track compared to the child welfare clients enrolled in the academic track, may not only be influenced by the background characteristics included in this study but may also differ on other important factors that influence their educational transition. For instance, child welfare clients (and other students) in the academic track may be more motivated than those in the vocational track.

Second, except for excluding child welfare clients who attended alternative upper secondary schools (i.e., those that provide special training for academically weak or highly unmotivated students) and adjusting for school grades, gender and parental education level, other potential differences within the child welfare population have not been analysed. It may be that child welfare clients who had the most negative experiences from being in the system were over-represented in the vocational track. Given these arguments, it is difficult to draw unequivocal conclusions about a causal relation between training in the two tracks and child welfare clients' educational success.

Still, the results show that child welfare clients' transition rate (relative to their peers) was lowest from the second to the third year in the vocational track. In this transition vocational students in Norway transfer to their apprenticeship. The fact that child welfare clients' drop-out rate is relatively high at this transition indicates that a training situation with an apprenticeship period may be more difficult for child welfare clients than for others. Becoming an apprentice involves two years of training in a public or private company. In Norway, training agencies can be helpful in finding apprenticeships and distributing them. However, the results indicate that getting an apprenticeship is harder for child welfare clients than others. Consequently, it seems reasonable to ask whether child welfare clients are discriminated against by apprenticeship training agencies or potential employers and/or whether they lack the necessary network to get an apprenticeship contract on their own. However, more research is needed to evaluate these possibilities.

Many school systems have parallel tracks in lower and/or upper secondary school that lead to different transitions and possibilities for educational progress. Regarding the goal of improving child welfare clients' educational attainment, it is necessary to examine the strengths and weakness of the educational system of which child welfare clients are a part.

The results from this study indicate that explanations within the tradition of social stratification research are important when explaining child welfare clients' dropping out of school and successful educational transitions in school. Consequently, initiating measures promoting educational equity will contribute to increased educational attainment in the child welfare population, at least in the transition from compulsory school to the first year of upper secondary school. However, the results show that such measures will not suffice. Child welfare clients have an additional disadvantage compared with the general population during upper secondary school, and the most critical transition during the vocational track is the one from the second to the third year. With the intention of increasing the number of child welfare

clients who complete upper secondary education, it will be necessary to initiate measures directed towards their success after the first upper secondary school year and in the transfer to the apprenticeship.

Table 1 Descriptive statistics for the child welfare population and comparison sample

	Child welfare population %	Comparison sample %	<i>P</i>
T1 (transition from compulsory school to upper secondary school)			
Not in such education	11.6	4.0	**
Vocational track	65.7	44.7	**
Academic track	22.7	51.3	**
T2 (transition to the second school year in upper secondary school)			
Not in such education	40.7	13.7	**
Vocational track	41.7	30.4	**
Academic track	17.5	47.9	**
T3 (transition to the third school year)			
Not in such education	59.9	23.2	**
Vocational track	14.2	16.7	**
Academic track	25.9	60.1	**
Gender			
Boys	52.5	52.7	
Girls	47.5	47.3	
Parental education level			
Lower secondary	27.3	8.5	**
Upper secondary	47.1	43.9	**
Higher education – short	17.6	33.6	**
Higher education – long	3.4	12.2	**
Unknown	4.6	1.8	**
Grades			
Very low	55.2	23.3	**
Low	18.1	23.7	**
High	10.4	26.4	**
Very high	4.8	22.2	**
Missing	11.2	4.4	**
(<i>n</i>)	(31.780)	(33.383)	

Note: ***P* = difference in means is statistically significant from zero at the 0.01 level

(independent samples test).

Table 2 Average marginal effects from multinomial logistic regression of the impact of grades, gender and parent education on transition from compulsory to upper secondary school (t1) ($n = 66.163$)

	Vocational track			Academic track		
	AME	P	SE	AME	P	SE
Child welfare clients	0.022	**	0.004	-0.043	**	0.003
Grades (ref = low grades)						
Very low	0.157	**	0.005	-0.224	**	0.004
High	-0.141	**	0.006	0.154	**	0.004
Very high	-0.299	**	0.008	0.294	**	0.005
Missing grades	-0.041		0.008	-0.125		0.007
Gender (ref = girls)	0.026		0.003	-0.018		0.003
Parent education level (ref = lower secondary school)						
Upper secondary	0.025	**	0.005	-0.003		0.005
Higher education – short	-0.073	**	0.005	0.091	**	0.005
Higher education – long	-0.197	**	0.008	0.196	**	0.007
Unknown	-0.201	**	0.013	0.094	**	0.013
<i>LL</i>			-45.556.37			
<i>Pseudo R squared</i>			0.298			

Note: ** $P < 0.01$, * $P < 0.05$ (Wald test). AME= Average marginal effects, SE= standard errors.

Control variables for completed compulsory school are not presented.

Reference category: majority peers, girls, with low school grades, completed compulsory school in 2006, from families with lower secondary school, who did not transfer to vocational or academic track immediately after completed compulsory school.

Table 3 Average marginal effects from binary logistic regression of the impact of grades, gender and parent education on the transition from the first to second year (t2), and from the second year to third year (t3) in upper secondary school. Computed separately for students in the vocational and academic tracks and separately for t2 and t3

	Transition t2			Transition t3		
	Model 1a			Model 2a		
	AME	P	SE	AME	P	SE
Vocational track						
Child welfare clients	-0.151	**	0.005	-0.117	**	0.005
Grades (ref = low grades)						
Very low	-0.182	**	0.006	-0.197	**	0.006
High	0.088	**	0.012	0.129	**	0.012
Very high	0.127	**	0.022	0.251	**	0.026
Missing	-0.326	**	0.009	-0.261	**	0.014
Gender (ref = girls)	0.048	**	0.004	-0.020	**	0.006
Parental education level (ref = lower secondary school)						
Upper secondary	0.020	**	0.005	0.022	**	0.007
Higher education – short	0.018	**	0.007	0.050	**	0.009
Higher education – long	-0.006		0.014	0.091	**	0.018
Unknown	0.003		0.018	0.067	**	0.025
<i>LL</i>	-18816.136			-14569.000		
<i>Pseudo R squared</i>	0.111			0.114		
<i>(n)</i>	(36.254)			(26.458)		
	Model 1b			Model 2b		
	AME	P	SE	AME	P	SE
Academic track						
Child welfare clients	-0.077	**	-0.103	-0.038	**	0.003
Grades (ref = low grades)						
Very low	-0.103	**	0.067	-0.040	**	0.004
High	0.067	**	0.087	0.033	**	0.004
Very high	0.087	**	-0.134	0.062	**	0.005
Missing grades	-0.134	**	0.035	-0.027	**	0.007
Gender (ref = girls)	0.035	**	-0.002	0.003		0.003
Parental education level (ref = lower secondary school)						
Upper secondary	-0.002		0.013	0.003		0.004
Higher education – short	0.022	*	0.003	0.005		0.004
Higher education – long	0.050		0.032	0.007		0.006

Unknown	0.091 *	0.027	0.009	0.010
<i>LL</i>	-7196.459		-3753.087	
<i>Pseudo R squared</i>	0.173		0.118	
<i>(n)</i>	(24.833)		(22.039)	

Note: ** $P < 0.01$, * $P < 0.05$ (Wald test). AME= Average marginal effects, SE= standard errors.
Control variables for completed upper secondary school is not presented.

Child welfare clients

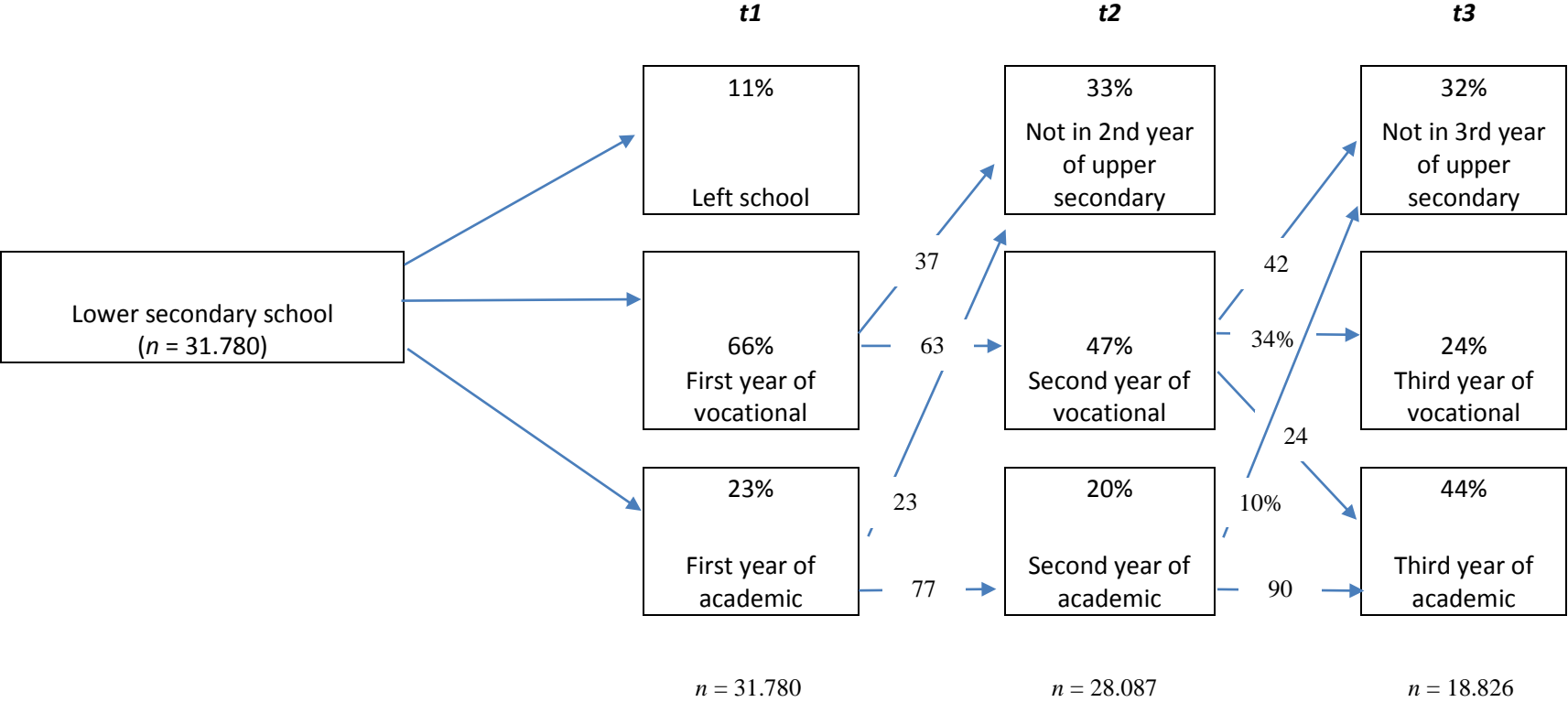


Figure 1 Educational transitions in the child welfare population and comparison sample

Comparison sample

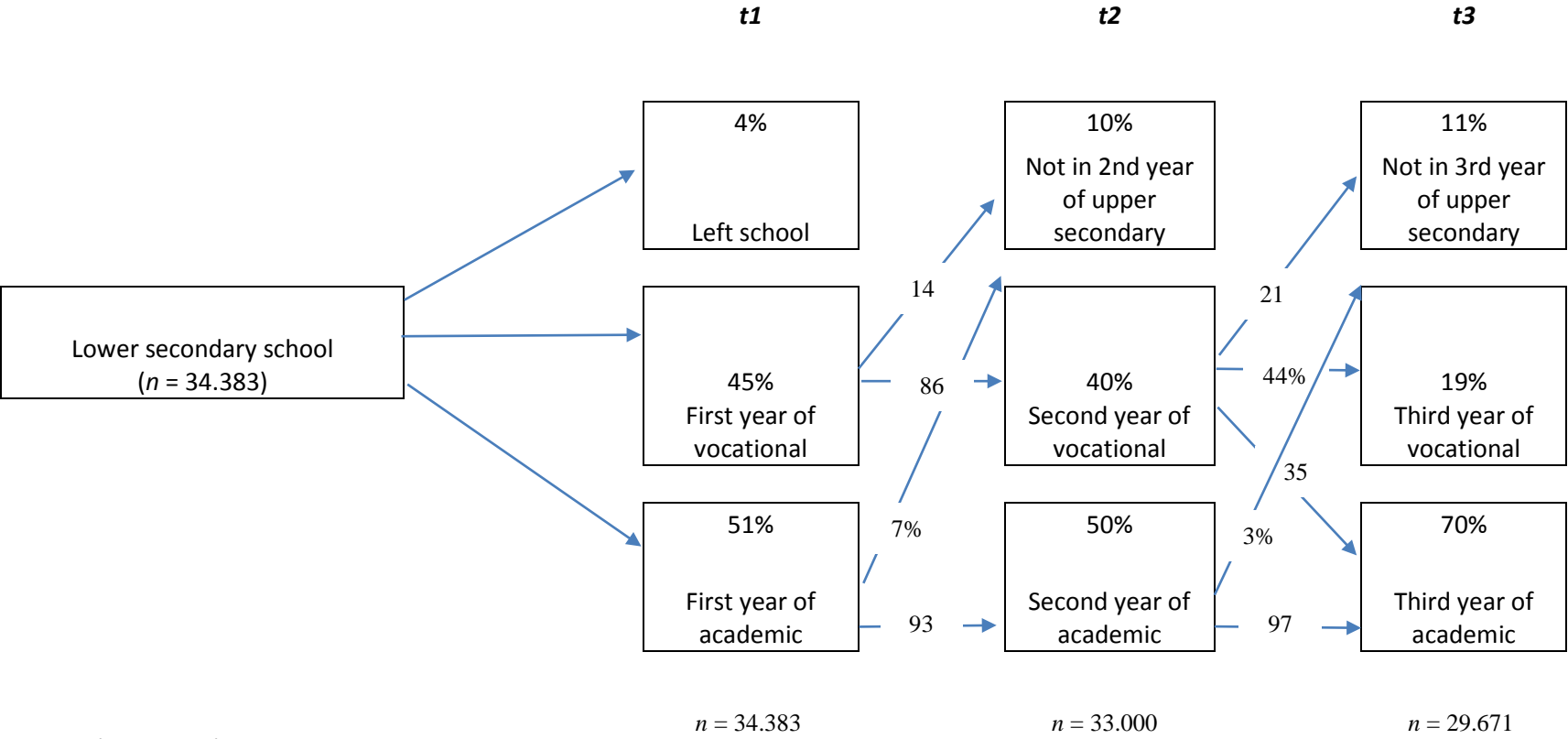


Figure 1 (continued)

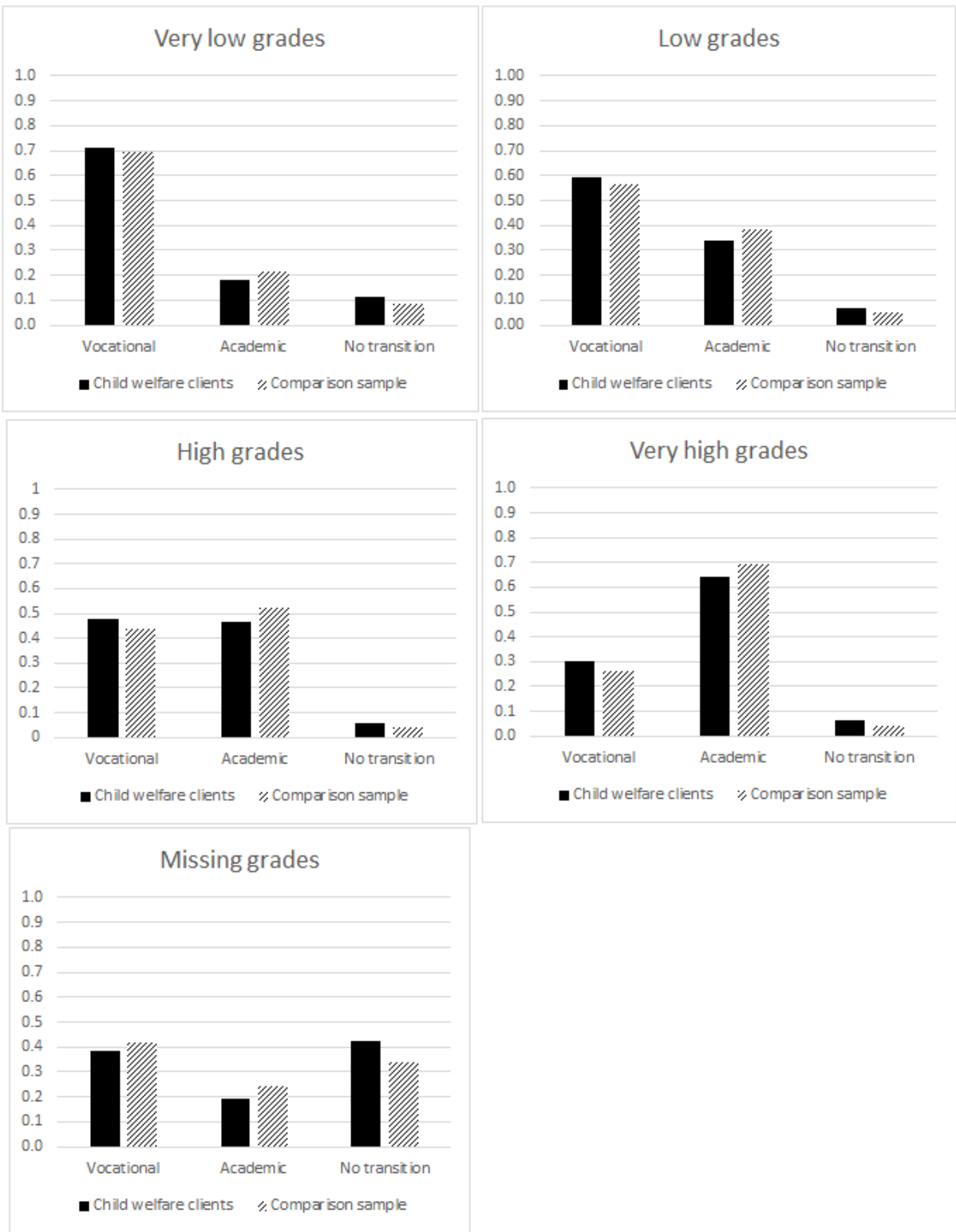


Figure 2 Estimated probabilities for educational transitions after compulsory school and grades in the child welfare population and general sample (based on estimates in table 2, for boys from lower secondary school originating from families with lower secondary education)

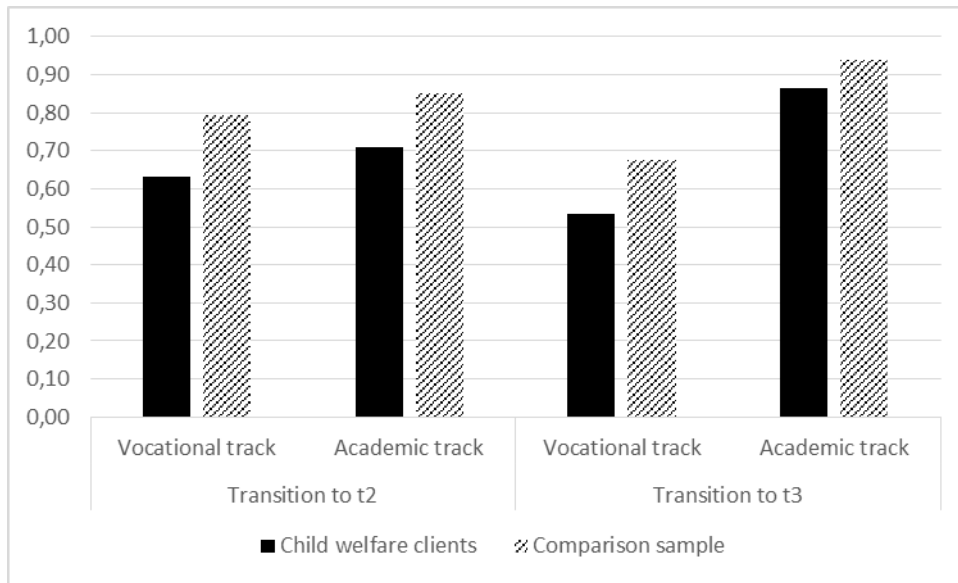


Figure 3 Estimated probabilities for transition to t2 and t3 in the child welfare population and in general sample (based on estimates from the four models in table 2, for boys with very poor grades from lower secondary school originating from families with lower secondary education)

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