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Career choices after completion of vocational training: the case of licensed practical nurses

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ABSTRACT

The initial career choice that young people make can become subject to change as individuals gain professional and personal experience. We study career choices made after vocational training and investigate the propensity to change occupation or obtain a tertiary degree among licensed practical nurses (LPNs) in Norway. To explain second-order career choices, we emphasise social and ethnic origin and early-career employment conditions. The results demonstrate substantial attrition from care work during the first 10 years of the career, and the mobility patterns display a clear social gradient. Part-time work in the early-career phase is associated with occupational attrition. The results suggest that LPNs, especially those of higher social origins, do not consider care work a lifelong career choice and that the lack of career opportunities and full-time work can be push factors out of the occupation.

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Introduction

One of the more important choices people make in life, is their choice of vocation. Some make this choice once, whereas others change careers throughout their life course. To date, few studies have investigated the antecedents of occupational change (Blau 2007, Carless and Arnup 2011, Medici et al. 2020). A critique against the study of social inequality in educational attainment is the lack of a life course perspective. According to Hillmert and Jacob (2003), scholars direct too much attention to the first, institutionalised educational transition from lower to upper secondary education. They argue that vocational qualifications need not be an alternative to university education, but it can also be a stepping stone for further qualifications. Hence, the social selectivity in educational and occupational trajectories may continue to evolve (Becker and Hecken 2009, Jacob and Weiss 2011). Moreover, labour market conditions, such as

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accessibility and job security, influence adolescents' occupational aspirations (Malin and Jacob 2019). Yet, VET-students' view of the occupational labour market can change with first-hand experience and alter the candidates' perspective of a lifelong career in the profession (Barbieri and Gioachin 2022, Carless and Arnup 2011, Jacob and Weiss 2011, Medici et al. 2020, Malin and Jacob 2019). Against this background, the key objective of this study is to investigate career choices made after vocational education and training (VET) among licensed practical nurses (LPNs) in Norway and explore their propensity to remain in the occupation, change occupations, or take further education. We emphasise social and ethnic origin as well as early-career employment conditions and combine the two to disclose how social positioning and employment conditions influence educational and career choices.

The healthcare field is a strong example of a qualification system where there is a close link between qualifications and occupational tasks. This implies that the candidate can expect to receive the highest returns to their education in the corresponding occupation and that upward mobility is restricted (Bédoué and Giret 2011, Medici et al., 2020). Thus, those who aspire to take on more responsibility or earn higher wages will need to get another qualification. Furthermore, small part-time positions and frequent weekend shifts characterise LPNs' work schedules. Previous research demonstrates that unsatisfactory working conditions can motivate career change (Blau 2007, Carless and Arnup 2011, Medici et al., 2020, Swain & Cara, 2010).

This study makes four contributions to the literature on educational inequality and occupational transitions. First, the transition from VET to higher education (HE) is an area of policy interest and development (Virolainen and Tønder 2018). So far, few studies investigate the social selectivity in mobility patterns. This study provides knowledge on whether further education narrows or widens social inequalities (Bathmaker 2017, 4), as it illustrates how students of different ethnic and social origins approach their further careers and how first-hand experiences with employment conditions are associated with different trajectories. The issues of involuntary part-time and low pay in this occupation are increasingly problematic if it also strengthens social and ethnic mobility patterns. This is because occupational composition informs cultural belief regarding suitability, which can affect recruitment (Orupabo, 2018). Second, although inter-generational social degradation in education is a common experience, research on this topic lingers (Hahn 2016). Thus, whether LPNs from higher social origin re-invest in education at a later career stage provides evidence on how class position continues to influence career trajectories through the life course. Third, we contribute an empirical analysis of comprehensive register data on individuals' educational and employment records over 10 years. We include vocationally trained LPNs who obtained their degree from 2005 to 2010 ($n = 17\ 837$) and observe the candidates' working conditions after graduation and use this information to predict the same subjects' career change 10 years

later. We can thus observe occupational change, which is rare (Blau 2007). Fourth, LPNs are a key resource to solve the imminent health personnel shortage, as they can easily train to relieve RNs. The ageing population, medical advances and challenges such as vacancies and high turnover among health care workers are currently addressed over the whole western world, including the UK (Anderson et al. 2021). Because of this, the Norwegian case of second-order career choices among LPNs offers insights that are relevant for all countries tackling the health- and care worker shortage.

This article proceeds as follows: First, we give a brief background information about the Norwegian context, with a special emphasis on LPN work. Second, we outline the theoretical framework and hypotheses drawing on both Bourdieu's Habitus theory (HT) and Rational Choice theory (RCT). Third, we present our data, methods, and findings and finally discuss and conclude on our findings.

The Norwegian context

LPNs have a vocational certificate at the upper secondary level. Training combines 2 years of schooling with a two-year apprenticeship. Candidates can obtain a general university and college admission certification through a - 'bridge year' with academic courses (Virolainen and Tønder 2018). The Norwegian HE systems has universal free access and offer financial support for students through student loans and grants. Admission to HE solely relies on GPA-scores from the upper secondary (Thomsen et al., 2017, p. 99). According to Thomsen et al. (2017), Norway has witnessed a substantial decrease in HE inequality since 1985, especially among women. This reason for this decrease is the enrolment of women in their 30s from lower social origins.

The primary employers of LPNs are the municipal health care services, which cover short- and long-term care facilities for elderly, disabled, and psychiatric patients. LPNs also work in secondary health care services, such as hospitals and specialised health care institutions. A persistent problem in the LPNs' labour market is the widespread use of part-time positions, especially in municipal health care where approximately 60% work part-time, and frequent weekend shifts. New generations of LPNs report on involuntary part-time, work-life conflict, and financial distress, as their work does not generate enough money to earn a living (Drange and Vabø 2021, Vabø et al., 2019). This, in turn, is associated with a higher turnover intention (Drange and Vabø 2021).

Theoretical framework

The two most prominent theories in sociological research on social and ethnic inequality in education and occupational choices are habitus theory (HT) and rational choice theory (RCT) (Glaesser and Cooper 2014, Liu 2019). Both HT and RCT emphasise the influence of social background and every-day contexts on

the youths' decision-making (Christodoulou 2016). According to Glaesser and Cooper (2014), the combination of these two theories into a notion of subjective rationality, where what appears rational or reasonable to each individual guides their choices and actions. The nuance is that HT enhances actors making *reasonable* choices, whilst RCT focuses on them making *rational* choices (Swedberg 2011).

Social and ethnic resources

Habitus theory (Bourdieu 1990) emphasises the cognitive and normative predispositions that guide actors' choices. These predispositions are a consequence of the environment where actors grow up and live, and the economic, cultural, and social forms of capital they possess. Habitus shapes both which goals appear desirable and the subjective estimation of their likelihood of success. The key element in HT is that children from higher social origins are more likely to obtain educational credentials because they have more capital resources and a habitus that aligns with the expectations in the education system (Bourdieu and Passeron 1990, Roksa and Robinson 2017). According to this view, both upwards and downwards social mobility would represent a breach of one's classed habitus (Bourdieu and Passeron 1990). Thus, habitus pushes LPNs from high social origins towards HE and restrains lower social class LPNs.

According to RCT, educational and labour market careers are the result of a sequence of decisions (Hillmert and Jacob 2003). RCT emphasises that actors make choices based on evaluations of the costs and benefits involved with acquiring certain educational credentials and choose the highest subjective utility alternative, given their current knowledge. Because actors come from various hierarchically ordered social classes, their choices reflect what these persons view as success and failure (Breen, Van De Werfhorst, and Jæger 2014, Hillmert and Jacob 2003, Van de Werfhorst and Hofstede 2007). The choices also reflect how risk-averse the person is and their willingness to postpone remuneration (Breen, Van De Werfhorst, and Jæger 2014). Because a key motivational factor behind the choice of education is to avoid degradation in social status, those who come from higher social origins are less affected by risk aversion (Breen, Van De Werfhorst, and Jæger 2014). For this group, a university degree or professional credentials can be the only viable option to avoid degradation.

Parents' educational and income levels are important parameters for school choice (Hillmert and Jacob 2003). Among students from lower social origins, recruitment to health care education, or vocational tracks in general, is sufficient to reproduce or improve their position in the social class hierarchy relative to their origin family. For students from higher social origins, vocational education will involve lower earnings and social prestige than their origin families (Breen, Van De Werfhorst, and Jæger 2014). Hillmert and Jacob (2003) argue that 'low performing' students can use vocational education as a stepping stone towards

university education and as an insurance strategy. Many students in health care express an interest in nursing already in the first year of their vocational education (Johansen 2020, 2021). As a stepping stone, vocational education can provide an 'easy' alternative to the more demanding academic track in upper secondary. Low achieving students can gain more self-esteem, motivation, and practice skills relevant to the university education insight. The vocational certificate can also be an insurance that gives the students the option to return to the labour market as skilled workers if university education fails. Both the steppingstone and the insurance strategies are costly due to more years in school and are more available to children of highly educated parents. Parents from higher social origins have higher expected income and a longer prospect of increasing income levels than parents from lower social origins. Therefore, students from higher social origins can expect to receive moral and economic support, whereas those from lower social origins can feel pressure to become economically independent earlier (Hillmert and Jacob 2003). Thus, second-order upward mobility through tertiary education is an attractive career path that is unequally obtainable for individuals according to social origin (Becker and Hecken 2009). Because of this, our first hypothesis is:

H1: *LPNs from higher social origins are more likely to obtain tertiary education.*

A recurrent theme in research on social mobility is the independent effects of ethnic origin on educational achievements. Immigrant-specific resources are the *ethnic capital* embedded in closely knit ethnic networks that harbour social norms, pressure, and organisation to promote achievement (Portes and Rumbaut 2001). The so-called 'immigrant advantages' motivate children of immigrants to use the new country's opportunities for education and upwards mobility (Friberg 2019). Ljunggren and Orupabo (2020) investigated the career prospects of second-generation immigrant students in vocational training as LPNs and electricians. These students were adamant about 'moving beyond' the occupation they were currently in qualification for. A recurrent explanation, corresponding with Hillmert and Jacob's (2003) insurance strategy, was that the vocational credential was a safety net. For the second-generation immigrants, vocational occupations were acceptable in a shorter time horizon but not something to do 'for the rest of their lives' (Ljunggren and Orupabo 2020).

We distinguish between first- and second-generation immigrants. Because first-generation immigrants speak Norwegian as a second language and may lack a parental provider to support them, the resources to embark on a second degree can be lower than the Norwegian majority population and the second-generation immigrants. However, the second-generation immigrants received all their schooling in the Norwegian system and speak the language fluently. They also have parental support. Thus, the second-generation is in position to

draw on the ethnic capital and 'drive.' Because of this, our second set of hypotheses are:

H2a: *First-generation immigrants have a lower likelihood of obtaining tertiary education compared with majority-origin LPNs.*

H2b: *Second-generation immigrants are more likely to obtain tertiary education than majority-origin LPNs.*

Early labour market experience

Because students choose their education according to subjective utility and vocational interests (Volodina and Nagy 2016), we expect that the primary interest of those who qualify as LPNs is to remain in the health care sector. However, Somers, et al. (2019) found that nursing students have an instrumental orientation towards nursing, in addition to an affective one. Somers et al. (2019) express concerns about whether the stress and demands in nursing jobs might outweigh the perceived benefits when the students enter the profession.

Most Norwegian students who choose between the vocational and academic track do so at age 16. At this stage, they might have information on average wages, employment relations, job content, and have an idea of the different occupations' social status and prestige. However, they have not experienced this first-hand. Hence, their notion of utility can very well change with personal development, life changes, and work experience (Hillmert and Jacob 2003, Jacob and Weiss 2011). A weighty reason for LPNs to change careers is if the labour market returns (e.g. wages, access to full-time employment and job mobility) do not meet their expectations. The Nordic countries have a mismatch in the supply and demand of LPN positions: New generations of LPNs prefer full-time employment, whereas employers still demand part-time employees (Vabø et al. 2019). Former research corroborates that the lack of full-time positions can motivate a career change (Swain and Cara 2010), as can low wages (Carless and Arnup 2011). We investigate whether low wages and short work hours, as indicators of marginal employment conditions, can spur mobility among LPNs through educational attainment or occupational mobility.

H3a: *Marginal employment conditions in the year following graduation are associated with an increased likelihood of obtaining tertiary education.*

H3b: *Marginal employment conditions in the year following graduation are associated with an increased likelihood of occupational mobility.*

Interplay between social and ethnic resources and early labour market experience

We expect that marginal employment conditions will motivate mobility from LPN work, but this change also imposes additional costs for the individual. Because occupational change, in contrast to job change, is a costly process (Blau 2007), it can reinforce social inequalities in occupational trajectories over a life course (Barbieri and Gioachin 2022). Hence, we expect a pattern of occupational attrition that mirrors the social and ethnic inequalities in access to resources.

Involuntary part-time employment and the associated lower earnings imply that social status degradation is more severe than a situation with full-time employment. Departing from a theory that actors seek to avoid status degradation, individuals from higher social origins can find this situation more intolerable than those from lower social origins and have less patience in finding better employment within the occupation.

H4a: *High SES LPNs display a stronger association between marginal working conditions and tertiary education*

Social origin effects may be at play in occupational mobility as well. Barbieri and Gioachin (2022) theorise that parental resources have a direct effect, i.e. not mediated through education, on occupational mobility away from 'a bad labour market entry' (Barbieri and Gioachin 2022, 1). It is rational for parents of higher social origin to use their resources to avoid social degradation for their children. The evidence corroborates this, as children from higher social origins develop more prosperous careers from a bad entry relative to working-class children in Italy. In Germany, however, children from higher social origin develop more prosperous occupational careers than those from lower social origins regardless of the quality of their labour market entry.

H4b: *High SES LPNs display a stronger association between marginal working conditions and occupational mobility*

Statistics reveal that immigrant women of non-Western origin replace native women in nurturant care work, which also covers LPN-work (Østbakken et al. 2022) In an ethnographic study of LPNs in Norwegian nursing homes,

Orupabo (2021) finds that both LPNs from the majority population and second-generation LPNs oppose inferior employment conditions, among other things, by talking about planning to leave their jobs. This is contrary to first-generation immigrants, who have a weaker labour market position. Thus, we believe that a sectorial change is less likely among first-generation immigrants, who have fewer resources to compete for better positions outside the health sector.

H4c: *First-generation immigrant LPNs display a weaker association between marginal working conditions and occupational mobility*

Data and methods

We used Microdata.no, an integrated analytic environment for data access and analyses to compare the career trajectories of all LPNs who graduated in Norway from 2005 through 2010.¹ The strength of these data is that we can access the full cohorts of educated LPNs² and trace their subsequent employment and educational history.

We collected information regarding education and employment outcomes in the year after graduation (T1) and 10 years after graduation (T2). As Microdata.no is updated until 2019, T2 for graduates of 2010 is 9 years after graduation. The primary employment relationship is registered 1 November each year. We observed early-career employment conditions in graduation year + 1, when the LPNs could earn a full year's salary.

Dependent variables

To investigate whether LPNs complete further education we observed their highest educational degree 10 years after graduation (T2). The variable values correspond to the international ISCED nomenclature, and we distinguished between a) secondary education (that is not LPN), b) nursing degree (tertiary), and c) other tertiary education. The reference category consists of those who do not obtain another degree.

We combined outcomes on three variables to investigate occupational mobility 10 years after graduation (T2): labour market status, industry, and occupation. The industrial-sector codes and occupational codes follow the international NACE nomenclature and ISCO-98 nomenclature, respectively. We distinguished between those who have relevant work for LPNs (work in the health care sector as a health care worker, reference category), non-relevant work for LPNs (other sectors or occupations), and those who are labour market inactive (i.e. not employed or actively seeking employment).

Demographic variables

We include social origins, country origin, gender, age, centrality, and year of graduation in the analyses.

Social background measures the parent with the highest educational level and distinguishes between those who have at least one parent with i) tertiary education, ii) secondary education, iii) elementary education, or iv) no information on education. Elementary education is the reference category.

Ethnic origin combines own and parents' country of origin. We distinguish between the majority population (Norwegian born to Norwegian-born parents), first-generation immigrants (foreign-born to foreign-born parents), or second-generation immigrants (Norwegian born to foreign-born parents).³ We distinguished the two latter categories between those originating from Europe versus the rest of the World (Asia, Africa, Latin America and USA, Canada, and Oceania). The majority population is in the reference category.

As rural and urban living areas have different labour markets and HE institutions have better availability in urban areas, we control for centrality (rural area is reference category) at time of graduation. We also control for gender (women as the reference category) and age at graduation (dummy variables).

Employment conditions

Early-career employment conditions were measured the year following graduation (T1) and has four categories: 1) Short part-time (<20 h a week) and low wage (below 2 G, two times the national insurance's basic amount (G)⁴); 2) short part-time with higher wage or long part-time (≥ 20 and <30 h a week) regardless of wage; 3) Unemployed; 4) full-time employment (≥ 30 h a week, reference category). The data does not distinguish between voluntary and involuntary part-time. In addition, we adjusted the analyses with a dummy variable for employment in somatic and psychiatric hospitals in the secondary health service (derived from the industrial sector) and a dummy variable indicating an increase in work hours from T1 to the following year (a shift from short to long part-time or full time, or from long part time to full time).

Methods

We used multinomial logistic regressions to assess educational and occupational mobility at T2. We analysed the LPNs' probability of obtaining a second degree for the full sample. We limit the analysis of occupational mobility to those who still have LPN education as their highest completed degree at T2 because those who have acquired further education per definition seek occupational mobility.

In the multinomial regressions, we add three layers of explanatory variables: first the demographic characteristics, then the employment conditions at T1, and finally the interaction terms between early-career employment conditions and social and ethnic origin. This allows us to analyse social inequality in mobility patterns and to check whether employment conditions intensify these patterns or not. The predicted probability of educational and occupational mobility for female LPNs graduated at age 25 illustrate differences in mobility probabilities for various categories of LPNs.

Microdata.no scrambles the descriptive statistics with ± 5 cases to maintain the anonymity of the population.⁵ The frequencies and percentages in the descriptive tables are therefore close to, but not exactly the true number in the population. The scrambling does not affect regression analyses and t-statistics.

Results

Descriptive results

Table 1 displays the demographic characteristics of the LPNs. The statistics demonstrate that LPNs are predominantly females from lower social origins and a substantial share of LPNs have first-generation immigrant origins from outside Europe. Most LPNs are employed the year after graduation. Few are

Table 1. Descriptive statistics for LPNs ($n = 17,840$).

Gender	Men	9%
	Women	91%
Parents' highest education level (social origins)	No information	21%
	Basic education	27%
	Secondary education	44%
	Tertiary education	8%
Immigrant origin	Norwegian majority	72%
	Europe, first gen.	7%
	Europe, second gen.	4%
	Africa and Asia (+ others) first gen.	15%
	Africa and Asia (+ others) second gen.	2%
Age at graduation	Mean age in years	
	<26 years	43%
	26 < 31 years	8%
	31 < 36 years	10%
Year of graduation	36 < years	40%
	2005	20%
	2006	18%
	2007	19%
	2008	20%
	2009	11%
Employment conditions T1	2010	11%
	Short part-time and low wage	6%
	Employed short part-time and wage >2 G or long part-time	44%
	Employed full-time	32%
	Unemployed or no wage	18%
	Hospital employment (ref. other)	4%
	Increase in work hours T1 + 1	16%

Table 2. Descriptive statistics for labour market status, occupation, and educational level at T2.

Educational level	LPN (no change)	88%
	Other secondary education	2%
	Tertiary education	4%
	Nursing degree	6%
	Number of obs.	17 840
Occupational status*	Labour market inactive	13%
	Employee	85%
	Self-employed	1%
	Unemployed	1%
	No information	1%
	Number of obs.	16 089
Occupation**	Care work	73%
	Nursing	7%
	Social educator	1%
	Kindergarten assistants	3%
	Other care work	2%
	Shop workers	1%
	Office workers	1%
	Cleaning	1%
	Kindergarten teachers	1%
	Home aids	1%
	Milieu therapists	1%
	Other occupations (109)	9%
	Number of obs.	13 651

*Calculated for resident persons below 63 years only.

**Calculated for resident and employed persons below 63 years only.

employed in hospitals, as most are employed in the municipalities. Over half have a part-time position.

Table 2 displays education, occupational status, and occupation in T2 for those below early retirement age (63 years). Twelve per cent of LPNs complete further education, and among those who complete tertiary education, more than half take a nursing degree. It is less common to re-educate at the secondary level (2%).

Eighty-five per cent of LPNs are employees at T2, 13% are labour market inactive (not employed or actively seeking employment).

Approximately 73% of the LPNs who are employed remain in the occupation ten years later. Nursing is the second largest occupation to graduated LPNs, which reflects the fact that many have obtained further education as nurses. Occupations that have no specific educational or skill requirements, such as other types of care work, kindergarten assistants, shop workers, and office workers, also attract a substantial share of LPNs.

Educational mobility

The multinomial regressions in Table 3 test hypotheses 1, 2a, 2b, 3a and 4b regarding the probability of further education 10 years after graduation as LPNs. The analysis in model 1 displays that LPNs with at least one parent with tertiary or secondary education have a higher likelihood of

obtaining tertiary education, than LPNs whose parents have low or unknown education.

Figure A1 displays the predicted probabilities (PP) from model 1. First, more LPNs choose to pursue a nursing education contrary to any other tertiary education, and the preference for a nursing degree increases with social origins. Ten years after graduation, 18% of those with higher social origins and 8% of those with low social origins have completed tertiary education (figure A1). The findings corroborate hypothesis 1.

Model 1 shows that first-generation non-European immigrants obtain tertiary education to the same extent as those of Norwegian majority origin, whereas first-generation European immigrants have a significantly higher likelihood of obtaining other tertiary education. Moreover, first-generation immigrants, independent of origin, have a significantly higher likelihood of obtaining a nursing degree than LPNs of majority origin. We find no significant association between second-generation immigrants and any further education. These findings do not support hypotheses 2a or 2b.

Model 2 in Table 3 tests hypothesis 3a that marginal employment conditions in the year after graduation are associated with obtaining tertiary education. Those who have a combination of short part-time and low wages in the first year after graduation have a higher likelihood of obtaining a nursing degree or any other tertiary education than full-time employed LPNs (the reference category). Furthermore, those who obtain more work hours in their second year of employment display a significantly lower propensity to pursue further education than those who do not increase their work hours. This implies that marginal employment is associated with educational mobility away from care work. The findings corroborate hypothesis 3a. Figure A2 displays the predicted probabilities from model 2.

Finally, Model 3 tests hypothesis 4a with an interaction between high social origins and early-career employment conditions. The interaction terms for tertiary education do not display a pattern of mutual reinforcement. Contrary to the hypothesis, the interaction term for a nursing degree is negative, indicating that LPNs of a higher social origin have a lower inclination to obtain a nursing degree if they are first hired under marginal employment conditions. LPNs from higher social origins still display higher levels of educational mobility compared with LPNs from lower social origins, but we find a smaller relative difference between the two groups that have marginal employment conditions in the first year after graduation.⁶ The results do not support hypothesis 4a.

We perform three robustness checks of our results on educational mobility. First, we exclude those who commence tertiary education in the first two years after graduation to reduce the impact of reverse causality and that LPNs work short-part time because they combine paid employment with further studies. The correlations between early-career employment conditions and further

education are present in this sample as well (see Appendix [Table A1 C](#)), which supports hypothesis 3a.

Second, we include grades in lower secondary education as a predictor.⁷ An important caveat to the rational choice theory is that the impact of social class on educational choices concerns the average student, as the most and least academically talented individuals from all classes concentrate in the upper and lower rungs of the educational hierarchy, respectively (Van de Werfhorst and Hofstede 2007, 394). In our data, grades are only available for the youngest LPNs. Grades reduce but do not remove the observed pattern between social origin and further education at T2 (see Appendix [Table A1 A](#)).

As a third robustness check, we perform separate analyses for LPNs aged 25 and below and 26 and older at graduation because parental influence in career decisions can attenuate over the life course. In line with Jacob and Weiss (2011, 424), we do not find evidence of age differences, as social origin continues to predict educational mobility among the older graduates as well as the younger (see Appendix [Table A1 B](#)).

Occupational mobility

The multinomial regressions in [Table 4](#) test the probability of occupational mobility 10 years after graduation as LPNs for those who do not take further education. These models test the hypotheses concerning the role of early-career employment conditions for occupational mobility (H3b, model 2) and the interaction between marginal employment conditions and social origins (H4b, model 3) and first-generation immigrant status (H4c, model 4).

LPNs who have marginal employment conditions (combination of short part-time and low wages) at T1 have a significantly higher probability of being in a different occupation in T2, compared with the reference group (full-time workers). In contrast, LPNs who increase working hours from T1 to the next year display a decreased likelihood of occupational mobility. These findings support the hypothesis that marginal working conditions are associated with occupational mobility (H3b).

We find no statistically significant interaction between marginal employment conditions and social (model 3) or ethnic origin (model 4). These findings do not support hypothesis 4b nor hypothesis 4c.

Discussion

This research investigated the career trajectories of LPNs to disclose patterns of secondary career choice from a social inequality perspective and from experiences with early-career employment conditions.

Our findings show that a substantial share of LPNs have obtained a tertiary education, particularly as nurses. This finding demonstrates that the

vocational path to HE, as described by Hillmert and Jacob (2003), is also common in Norway. Our analyses reveal a social gradient to this career path, as those from higher social origins are more likely to obtain any tertiary education, particularly a nursing degree. This clearly illustrates that the vocational track to HE is more accessible to higher origin LPNs, which is in line with theory (Hillmert and Jacob 2003). According to both HT and RCT, HE is more reasonable and rational for actors from higher social origins than from lower. The strengthening of social inequality through educational mobility mirrors results from Germany (Becker and Hecken 2009) and the U.S. (Jacob and Weiss 2011).

Contrary to what we expected, the results indicate that first-generation immigrants from both Europe and the rest of the World have a higher probability of obtaining a nursing degree than most LPNs. One explanation could be that foreign-educated nurses get a partial accreditation and start as an LPN when they enter the Norwegian labour market. Those immigrants can be more likely to take additional courses in nursing subjects in Norway to reconnect with their pre-migration occupation. However, this does not explain why LPNs of immigrant origins obtain other tertiary education to the same extent (first-generation European immigrants, more often) as LPNs from the Norwegian majority. This signals that LPNs of immigrant origin have similar educational mobility ambitions and opportunities as the majority population. Hence, these first-generation immigrants might have other, unobserved resources that are not in the register data.

We found no support for higher educational mobility among second-generation LPNs. This is somewhat surprising, given that second-generation immigrants voice educational ambitions and view LPN education as 'something to fall back on' (Ljunggren and Orupabo 2020, Orupabo 2021). It can imply that second-generation immigrants meet barriers to enrol or graduate from tertiary education that hinders the realisation of this voiced ambition. Nevertheless, the educational mobility rates are on par with majority graduates, and do not signal weaker educational mobility.

The findings support our hypotheses that marginal employment conditions are associated with an increased mobility from care work, either through education or to another occupation. Hence, working conditions not only increase LPNs' intention to quit (Drange and Vabø 2021) but also correlate with actual behaviour. Because involuntary part-time is a persistent problem in Norwegian care-work (Drange and Vabø 2021), we presume that lack of opportunities is a main reason behind this mobility. Other reasons can be that some LPNs reduce hours and escape the occupation because they do not enjoy the work, are no good at the work, find it too stressful or already have begun HE. However, we observe them in the first year after graduation when they have limited experience with LPN-work, and we find similar

results in a subsample that are not enrolled in HE 2 years after graduation. Thus, mobility also appears among those who do not immediately transition to HE.

Contrary to our expectations, we did not find that marginal working conditions had a stronger association with educational mobility among those from higher social origins. This finding challenges the theoretical premise that marginal working conditions would entail an even larger status degradation than full-time work among this group. Instead, we find that marginal working conditions are a larger mobiliser towards HE among those from middle and lower social origins. One interpretation of this is that those from higher social origins enter HE independent of working conditions because education is the reasonable choice that corresponds to their habitus. For those in lower social origins, however, working conditions can alter the cost–benefit calculation towards HE for those who did not associate LPN work with status degradation from the outset. Moreover, we find that marginal working conditions *reduce* the likelihood that someone from higher social origins chooses a nursing degree, relative to those from lower and middle social origins. This is not true for other tertiary education. If we apply the lens of HT, one interpretation of this finding is that the social position and habitus forms which choices seem available and attainable. Whereas LPNs from higher social origins might have a wider horizon of choices due to their cultural and social capital and familiarity with the educational system, those from lower social origins might have a narrower outlook on viable options and thus evaluate nursing as an accessible and safe choice. Further research should investigate how the prospective students chose between types of tertiary education.

Our second path of investigation concerned social and ethnic inequality in mobility to another occupation without re-qualification through further education, as this form of mobility demands lower costs and effort. However, transferring occupational-specific LPN skills to another occupation can involve a loss of efficiency and lower wages (Blau 2007). We anticipated that LPNs from higher social origins would be more likely to change occupation, conditional on marginal employment conditions. We did find more occupational mobility among LPNs from higher social origins, but this pattern did not fortify under marginal employment conditions. Hence, the result for LPNs is closer to the German case, where parents of higher social origins stimulate occupational mobility independent of a ‘bad’ or stable early labour market entry (Barbieri and Gioachin 2022). We also assumed that the relative significance of marginal employment conditions for occupational mobility would be lower for first-generation immigrants than for other LPNs, because of their weaker labour market position. This hypothesis did not receive support. Hence, first-generation immigrants display similar mobility patterns as a response to bad employment conditions as other LPNs.

Conclusion

This research provides evidence of educational and occupational pathways out of LPN work and social selectivity in the choices of new career trajectories. First, LPNs from higher social origins take further education to a greater extent than LPNs from lower social origins, and more than half take a nursing degree. This implies that part of the health-sector workforce opts for an occupation higher in the professional hierarchy with better prospects in terms of wages, employment conditions, job alternatives, and status.

Second, the association of marginal employment conditions with educational and occupational mobility emphasises the importance of initiatives to combat part-time work in the care sector. Our results indicate that marginal employment conditions can push trained staff out of the occupation both through the educational track and through occupational change. These findings emphasise why it is important to study the rationale behind secondary career choices.

Third, this research points to the necessity of research studying second-order career choices to understand what factors limit and contribute to the recruitment and retention of skilled employees in care work. Eventually, this selectivity out of LPN work can change the face of the occupation and make it difficult to portray LPN work as a future-oriented occupation to young adults of different social and ethnic origins.

The accuracy of events and the high number of individuals in the register data allow for detailed panel-analyses of career and educational mobility. Such analyses can show the social inequalities in choices and their consequences. However, we need more knowledge about other antecedents of occupational change, such as working environment, occupational and educational aspirations, and how they change over the life course. Future research on secondary career- and educational choices should combine insights from both registries, surveys, and qualitative research, which could contribute to theoretical advancements in explaining second-order career choices.

Notes

1. Please contact the corresponding author for the code for data extraction and analyses.
2. We select all graduates with educational code '4612' and '4619' that correspond to LPN training.
3. Because of a low number of second-generation immigrants in the sample, we also include first-generation immigrants who arrived in Norway before age 7 because they have all their schooling from Norway.
4. G is regulated each year to comply with overall increases in income. In 2010 1 G was 75 641 NOK.
5. Because Microdata.no scrambles cell and marginal sums of statistics tables independent of each other, these sums do not add up by design. The descriptive statistics yield 17 840 cases and the regressions 17 837 cases.

6. Separate analyses by class origin corroborates that marginal working conditions (short part-time and low wage) are a significant mobiliser among those from lower and medium social origins and not among those from higher social origins.
7. The grading scale is from 1 (lowest) to 6 (highest). We use the z-score for the mean grade across English, maths, and Norwegian (written) to adjust for LPNs' academic aptitude.

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References

- Anderson, M., C. O'Neill, J. Macleod Clark, A. Street, M. Woods, C. Johnston-Webber, A. Charlesworth, et al. 2021. "Securing a Sustainable and Fit-For-Purpose UK Health and Care Workforce." *Lancet (London, England)* 397 (10288). [https://doi.org/10.1016/S0140-6736\(21\)00231-2](https://doi.org/10.1016/S0140-6736(21)00231-2).
- Barbieri, P., and F. Gioachin. 2022. "Social Origin and Secondary Labour Market Entry: Ascriptive and Institutional Inequalities Over the Early Career in Italy and Germany." *Research in Social Stratification and Mobility* 77:100670. <https://doi.org/10.1016/j.rssm.2021.100670>.
- Bathmaker, A. M. 2017. "Post-Secondary Education and Training, New Vocational and Hybrid Pathways and Questions of Equity, Inequality and Social Mobility: Introduction to the Special Issue." *Journal of Vocational Education & Training* 69 (1): 1–9. <https://doi.org/10.1080/13636820.2017.1304680>.
- Becker, R., and A. E. Hecken. 2009. "Why are Working-Class Children Diverted from Universities?—An Empirical Assessment of the Diversion Thesis." *European Sociological Review* 25 (2): 233–250. <https://doi.org/10.1093/esr/jcn039>.
- Bédoué, C., and J. F. Giret. 2011. "Mismatch of Vocational Graduates: What Penalty on French Labour Market?" *Journal of Vocational Behavior* 78 (1): 68–79. <https://doi.org/10.1016/j.jvb.2010.09.003>.
- Blau, G. 2007. "Does a Corresponding Set of Variables for Explaining Voluntary Organizational Turnover Transfer to Explaining Voluntary Occupational Turnover?" *Journal of Vocational Behavior* 70 (1): 135–148. <https://doi.org/10.1016/j.jvb.2006.07.007>.
- Bourdieu, P. 1990. *The Logic of Practice*. Stanford university press.
- Bourdieu, P., and J. C. Passeron. 1990. *Reproduction in Education, Society and Culture*. Vol. 4. London: SAGE publications.

- Breen, R., H. G. Van De Werfhorst, and M. M. Jæger. 2014. "Deciding Under Doubt: A Theory of Risk Aversion, Time Discounting Preferences, and Educational Decision-Making." *European Sociological Review* 30 (2): 258–270. <https://doi.org/10.1093/esr/jcu039>.
- Carless, S. A., and J. L. Arnup. 2011. "A Longitudinal Study of the Determinants and Outcomes of Career Change." *Journal of Vocational Behavior* 78 (1): 80–91. <https://doi.org/10.1016/j.jvb.2010.09.002>.
- Christodoulou, M. 2016. "Excluded and Dropped In: Habitus and Biographical Identity in Vocational adolescents' Life Transitions." *Journal of Vocational Education & Training* 68 (3): 320–341. <https://doi.org/10.1080/13636820.2016.1212248>.
- Drange, I., and M. Vabø. 2021. "A Cross-Sectional Study of Sustainable Employment in Nordic ElderCare." *Nordic Journal of Working Life Studies* 11 (S7). <https://doi.org/10.18291/njwls.128595>.
- Friberg, J. H. 2019. "Does Selective Acculturation Work? Cultural Orientations, Educational Aspirations and School Effort Among Children of Immigrants in Norway." *Journal of Ethnic and Migration Studies* 45 (15): 2844–2863. <https://doi.org/10.1080/1369183X.2019.1602471>.
- Glaesser, J., and B. Cooper. 2014. "Using Rational Action Theory and Bourdieu's Habitus Theory Together to Account for Educational Decision-Making in England and Germany." *Sociology* 48 (3): 463–481. <https://doi.org/10.1177/0038038513490352>.
- Hahn, Sophie. 2016. *Risk of Downward Mobility in Educational Attainment*. Springer VS. <https://doi.org/10.1007/978-3-658-14598-9>.
- Hillmert, S., and M. Jacob. 2003. "Social Inequality in Higher Education. Is Vocational Training a Pathway Leading to or Away from University?" *European Sociological Review* 19 (3): 319–334. <https://doi.org/10.1093/esr/19.3.319>.
- Jacob, M., and F. Weiss. 2011. "Class Origin and Young adults' Re-Enrollment." *Research in Social Stratification and Mobility* 29 (4): 415–426. <https://doi.org/10.1016/j.rssm.2011.02.004>.
- Johansen, E. M. 2020. "Helsefagarbeideren, Yrkesfaglæreren Og Det Tredelte Klasserommet. [The Liscenced Practical Nurse, the Teacher and the Tripartite Classroom]." *Fagbladet Samfunn og Økonomi* (1–2). <http://www.samfunnogokonomi.no/2021/01/helsefagarbeideren-yrkesfaglaereren-og-det-tredelte-klasserommet/>
- Johansen, E. M. 2021. "Yrkesfaglærerens Paradoks: Utdanne Til Fagarbeid Eller Videre Studier? [The Paradox of the VE Teacher: Education for Vocation or Studies?]" *Nordic Journal of Vocational Education & Training* 11 (2): 46–67. <https://doi.org/10.3384/njvet.2242-458X.2111246>.
- Liu, Y. 2019. "Choices, Risks and Rational Conformity: Extending Boudon's Positional Theory to Understand Higher Education Choices in Contemporary China." *Higher Education* 77 (3): 525–540. <https://doi.org/10.1007/s10734-018-0285-7>.
- Ljunggren, J., and J. Orupabo. 2020. "Moving Beyond: Narratives of Higher Educational Aspirations Among Descendants of Immigrants in Vocational Training." *British Journal of Sociology of Education* 41 (5): 701–716. <https://doi.org/10.1080/01425692.2020.1776593>.
- Malin, L., and M. Jacob. 2019. "Gendered Occupational Aspirations of Boys and Girls in Germany: The Impact of Local VET and Labour Markets." *Journal of Vocational Education & Training* 71 (3): 429–448. <https://doi.org/10.1080/13636820.2018.1517128>.
- Medici, G., C. Tschopp, G. Grote, and A. Hirschi. 2020. "Grass Roots of Occupational Change: Understanding Mobility in Vocational Careers." *Journal of Vocational Behavior* 122:103480. <https://doi.org/10.1016/j.jvb.2020.103480>.
- Orupabo, J. 2018. "Cultural Stereotypes and Professional Self-Socialisation in the Transition from Education to Work." *Journal of Education & Work* 31 (3): 234–246. <https://doi.org/10.1080/13639080.2018.1459513>.

- Orupabo, J. 2021. "Hverdagsmotstand: den skjulte kampen om anerkjennelse [Everyday resistance: the hidden struggle for recognition]." In *Arbeiderklassen*, edited by J. Ljunggren and M. N. Hansen, 257–272. Oslo: Cappelen Damm Akademisk.
- Østbakken, K. M., J. Orupabo, and M. Nadim (2022). The Hierarchy of Care Work: How Immigrants Influence the Gender-Segregated Labor Market. *Social Politics: International Studies in Gender, State & Society*. <https://doi.org/10.1093/sp/jxac039>
- Portes, A., and R. G. Rumbaut. 2001. *Legacies: The Story of the Immigrant Second Generation*. Berkeley, Los Angeles, California: Univ of California Press.
- Roksa, J., and K. J. Robinson. 2017. "Cultural Capital and Habitus in Context: The Importance of High School College-Going Culture." *British Journal of Sociology of Education* 38 (8): 1230–1244. <https://doi.org/10.1080/01425692.2016.1251301> .
- Somers, M. J., D. Birnbaum, L. Finch, and J. Casal. 2019. "Psychological Attachment to Nursing in the Early Career: Occupational Commitment Profiles, Motivational Patterns, Retention, and Performance." *Journal of Vocational Education & Training* 71 (4): 501–518. <https://doi.org/10.1080/13636820.2018.1535516>.
- Swain, J. M., and O. Cara. 2010. "Skills for Life teachers' Career Pathways in the Learning and Skills Sector, 2004–2007: Part-Time Jobs for Part-Time Workers." *Journal of Vocational Education & Training* 62 (3): 257–271. <https://doi.org/10.1080/13636820.2010.493618>.
- Swedberg, R. 2011. "The Economic Sociologies of Pierre Bourdieu." *Cultural Sociology* 5 (1): 67–82. <https://doi.org/10.1177/1749975510389712>.
- Thomsen, Jens-Peter, Emil Bertilsson, Tobias Dalberg, Juha Hedman, and Håvard Helland. 2017. "Higher Education Participation in the Nordic Countries 1985–2010—a Comparative Perspective." *European Sociological Review* 33 (1): 98–111. <https://doi.org/10.1093/esr/jcw051>.
- Vabø, M., I. Drange, and N. Amble. 2019. "Den vanskelige deltidsknoten en særnorsk utfordring som rammer unge helsefagarbeidere [The difficult part-time knot. A Norwegian challenge that affects young health care workers]." *Fagbladet Samfunn og Økonomi* 1 (2019): 7–21.
- Van de Werfhorst, H. G., and S. Hofstede. 2007. "Cultural Capital or Relative Risk Aversion? Two Mechanisms for Educational Inequality Compared 1." *The British Journal of Sociology* 58 (3): 391–415. <https://doi.org/10.1111/j.1468-4446.2007.00157.x>.
- Violainen, M., and A. H. Tønder. 2018. "Progression to Higher Education from VET in Nordic Countries: Mixed Policies and Pathways." In *Vocational Education in the Nordic Countries*, edited by C. H. Jørgensen, O. J. Olsen, and D. P. Thunqvist, 51–73, Routledge.
- Volodina, A., and G. Nagy. 2016. "Vocational Choices in Adolescence: The Role of Gender, School Achievement, Self-Concepts, and Vocational Interests." *Journal of Vocational Behavior* 95:58–73. <https://doi.org/10.1016/j.jvb.2016.07.005>.

Appendix

Table A1. Subsample A: Educational mobility 10 years after graduation. With grades and age below 26 at graduation (vocational education not shown).

	Other tertiary education		Nursing degree	
	logit	SE	logit	SE
Man (ref: woman)	0.350	0.262	0.233	0.244
Immigrant origin (ref: majority origin)				
First gen. Europe	0.447	0.475	0.654	0.400
First gen. World	0.139	0.440	0.939	*** 0.319
Second gen. Europe	-0.017	0.209	-0.006	0.187
Second gen. World	-0.321	0.283	0.219	0.212
Social background (ref: low)				
Unknown	0.297	0.584	-0.160	0.472
Middle	0.260	0.163	0.314	* 0.141
High	0.705	*** 0.202	0.782	*** 0.174
Urban area (ref: rural area)	0.427	** 0.125	0.315	** 0.107
Year of graduation (ref: 2005)				
y2006	-0.010	0.176	0.125	0.150
y2007	-0.068	0.168	0.016	0.145
y2008	-0.144	0.169	-0.336	* 0.150
y0910	-2.102	*** 0.263	-2.775	*** 0.277
Working conditions T1 (ref: full-time)				
Short part-time & low wage	1.877	*** 0.184	2.097	*** 0.165
Short- and long part-time	0.494	*** 0.151	0.780	*** 0.131
Unemployment	1.092	*** 0.180	1.368	*** 0.157
Increased work hours in first year	-0.686	*** 0.158	-1.087	*** 0.148
Hospital employment at T1	0.184	0.313	1.027	*** 0.223
High social background * short part-time & low wage	-0.151	0.299	-0.709	* 0.290
z-score grades	0.655	*** 0.055	0.716	*** 0.049
Constant	-2.965	*** 0.240	-2.743	*** 0.208

Number of obs: 4547

LR chi2(63): 1197.157205

Subsample B: below 26 years at graduation (vocational education not shown)

	Other tertiary education		Nursing degree	
	logit	SE	logit	SE
Man (ref: woman)	0.092	0.191	-0.081	0.176
Immigrant origin (ref: majority origin)				
First gen. Europe	0.567	0.292	0.317	0.272
First gen. World	-0.073	0.288	0.510	* 0.221
Second gen. Europe	-0.068	0.182	-0.126	0.162
Second gen. World	-0.201	0.238	0.147	0.184
Social background (ref: low)				
Unknown	-1.286	*** 0.338	-1.784	*** 0.278
Middle	0.450	** 0.142	0.408	** 0.118
High	1.000	*** 0.173	0.936	*** 0.145
Urban area (ref: rural area)	0.338	** 0.109	0.297	** 0.092
Year of graduation (ref: 2005)				
y2006	0.139	0.141	0.374	** 0.119
y2007	0.188	0.135	0.302	** 0.116
y2008	0.091	0.136	0.046	0.120
y0910	-1.601	*** 0.215	-2.161	*** 0.230
Working conditions T1 (ref: Full-time)				
Short part-time & low wage	1.776	*** 0.161	1.981	*** 0.142
Short- and long part-time	0.376	** 0.131	0.615	*** 0.112
Unemployed	0.771	*** 0.154	0.938	*** 0.134
Increased work hours in first year	-0.596	*** 0.139	-0.926	*** 0.127

(Continued)

Table A1. (Continued).

	Other tertiary education		Nursing degree	
	logit	SE	logit	SE
Hospital employment at T1	0.512	*	0.260	1.191 ***
High social background * short part-time & low wage	-0.197		0.262	-0.688 **
Constant	-3.241	***	0.199	-2.984 ***
Number of obs: 7640				
LR chi2(60): 1292.477156				
Subsample C: 26 years and older at graduation (vocational education not shown)				
	Other tertiary education		Nursing degree	
	logit	SE	logit	SE
Man (ref: woman)	0.752	***	0.236	-0.052
Immigrant origin (ref: majority origin)				0.279
First gen. Europe	1.864	***	0.576	1.384 **
First gen. World	1.404	*	0.566	1.343 **
Second gen. Europe	0.114		0.520	0.630
Second gen. World	-0.515		1,016	0.942
Social background (ref: low)				0.477
Unknown	-0.192		0.573	0.081
Middle	0.633	**	0.242	0.583 **
High	1.337	***	0.370	0.822 *
Urban area (ref: rural area)	-0.051		0.196	-0.242
Year of graduation (ref: 2005)				0.163
y2006	0.095		0.260	0.017
y2007	0.084		0.261	-0.216
y2008	-0.176		0.273	-0.280
y0910	-0.760	*	0.295	-1.121 ***
Working conditions at T1 (ref: full-time)				0.265
Short part-time & low wage	1.139	**	0.360	1.494 ***
Short- and long part-time	0.056		0.207	0.649 ***
Unemployed	-0.376		0.312	-0.206
Increased work hours in first year	-0.407		0.284	-0.543 *
Hospital employment at T1	0.227		0.518	0.509
High social background * short part-time & low wage	-19.692		13342.301	-0.059
Constant	-4.869	***	0.307	-4.517 ***
Number of obs: 10 198				
LR chi2(60): 223.057929				
Subsample D: not in higher education two years after graduation (vocational education not shown)				
	tertiary degree		nursing degree	
	model 3		model 3	
	Logit	SE	Logit	SE
Man (ref: woman)	-0.042		0.189	-0.126
Age at graduation	-0.109	***	0.008	-0.101 ***
Immigrant origin (ref: majority origin)				0.006
First gen. Europe	0.543		0.312	0.568 *
First gen. World	-0.227		0.315	0.390
Second gen. Europe	0.030		0.197	0.087
Second gen. World	-0.174		0.270	0.459 *
Social background (ref: low)				0.206
Unknown	-0.100		0.342	-0.001
Middle	0.441	**	0.145	0.341 **
High	0.927	***	0.181	0.747 ***
Urban area (ref: rural area)	0.312	**	0.113	0.275 *
Year of graduation (ref: 2005)				0.104
y2006	0.084		0.144	0.166
y2007	0.037		0.141	0.012

(Continued)

Table A1. (Continued).

	Other tertiary education		Nursing degree	
	logit	SE	logit	SE
y2008	-0.015	0.141	-0.016	0.131
y0910	-1.308 ***	0.206	-1.617 ***	0.211
Working conditions T1 (ref: full-time)				
Short part-time & low wage	0.797 ***	0.187	0.245	0.202
Short- and long part-time	-0.008	0.124	0.134	0.110
Unemployment	-0.104	0.166	-0.670 ***	0.169
Increased work hours in first year	-0.329 *	0.146	-0.276 *	0.130
Hospital employment at T1	0.449	0.258	0.785 ***	0.206
High social background * short part-time & low wage	0.074	0.321	0.021	0.367
Constant	-0.915 ***	0.274	-0.868 ***	0.243
Number of obs	16,961			
LR chi2(63): 1483.324087				

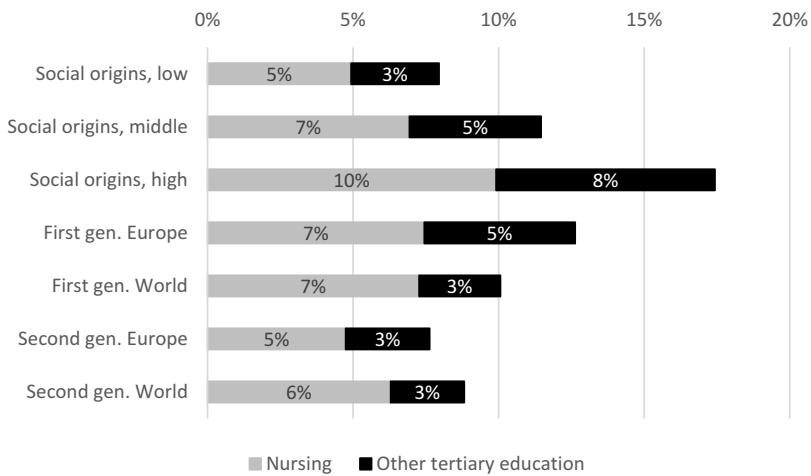


Figure A1. Predicted probabilities of further education ten years after graduation (model 1, table 3). Probabilities for: women, educated in 2005, living in rural areas, 25 years at graduation.

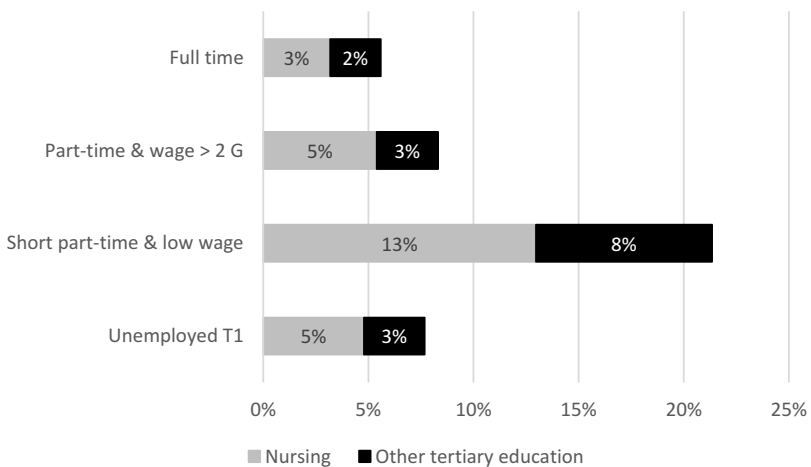


Figure A2. Predicted probabilities of further education ten years after graduation (model 2, table 3). Probabilities for: majority women from low social origins, educated in 2005, rural living areas aged 25 at graduation.