The complicated relationship between parental status and disability: A register study of the 1968 to 1970 birth cohorts

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Research article

Keywords: Disability, child, children, disability benefits, early retirement, fertility, having children, parenthood, parental status.

DOI: https://doi.org/10.21203/rs.3.rs-61041/v1

Abstract

Background Having children is a major life course, yet some disabilities could make it biologically impossible and some others could limit access to necessary socioeconomic resources. To date, there is relatively little data on disability and parental status. Thus, our study investigates the relationship between disability and parental status.

Methods This longitudinal cohort study uses register data from all people born in Sweden from 1968 to 1970 (n=440,202). Of these, 146,946 people were excluded as they did not meet the inclusion criteria. Therefore, the analysis was based on 293,256 people whom we followed from birth through the end of the study in 2010. We performed descriptive statistical analyses, graphical plots and logistic regression analyses to investigate the interplay between the use of disability benefits and the chance of having a first child. Additionally, we used contingency tables and multinomial logistic regression to investigate the chances of having a first child at different age intervals based on the age of starting on disability benefits.

Results Receiving disability benefits was strongly associated with reduced chances of having children. Starting on disability benefits at a very early age was associated with low chances of having children during the individual's lifetime. People that had a first child between 13—20 years of age were more likely to receive disability benefits during their 30s and 40s compared to the rest of the population. Men with disabilities were less likely to have children when compared to women with disabilities and to men and women without disabilities.

Conclusions We found evidence of a complicated association between disability and parental status. Early recipients of disability benefits had reduced chances of having children, while having children at an early age was linked to increased risk of using disability benefits later in life. Our findings support policies for promotion of quality health to reduce early use of disability benefits and the related consequences. We further highlight a need to strengthen public health policies geared at reducing very early parenthood and support for young parents, this would promote individual health and could contribute to a reduction in early exits from work.

Background

Many societies consider having children as a major life course event [1]. In modern societies, children are shown to offer psychosocial benefits, such as the intrinsic pleasure derived from watching one's own children grow and having someone for regular interaction [2]. Having children is also associated with improved physical health and enhanced health behaviours, such as cessation of smoking and alcohol abuse [3]. However, the decision to have or not to have children is often based on an individual's current and future socio-economic circumstances[1].

Having a disability can profoundly affect the choice and/or ability to have children, as some disabilities make it biologically impossible, [4] while other disabilities might limit access to socioeconomic resources [5]. Oppenheimer's uncertainty hypothesis suggests that insufficient economic resources hinder marriage [6–8]. In addition, fertility patterns are shown to be fundamentally affected by economic factors and family structure [9–10]. Current literature indicates that people with disabilities report limited economic opportunities and higher poverty rates [9–10]. The theory of assortative mating suggests that assortative mating on disability status limits the partnership market of people with disabilities [11–12]. Our data shows that disability is associated with low levels of partnership and high levels of single living [13–14]. Similar observations are also reported elsewhere [15–17]. In addition, people with disabilities report experiencing negative society attitudes characterised by infantilisation and being treated as asexual [18–22]. People with disabilities have also reported structure barriers and limited access to fertility services [23–24]. All these factors increase barriers to partnership formation among people with disabilities, implying a decreased probability of having children, as the two events tend to follow a sequential pattern.

Compared to the extensive body of research on parenthood in the general population, there is relatively little data on the parental status of people with disabilities. Available research can be divided into two subsets. One body of research examines the experiences of parenting with a disability and being a parent to a child with a disability [11,18–24]. Another branch of research focuses on the parenthood status of people with learning disabilities and physical disabilities [21–25]. There is still little research on the extent to which people with disabilities become parents and the association between disability and parental status.

Literature operationalises disabilities differently. Some definitions include self-reported disability, disability diagnosis and the administrative definition. This study uses an administrative definition that only considers one to have a disability if they receive disability benefits [26–29]. In Sweden, disability benefits are part of a public social security programme that provides income support to people of working age that experience long-term health limitations in their working capacity [26–29]. European data suggests that the number of young people exiting the labour market early is increasing [30]. Getting a disability that requires exiting the work force at a young age, increases the length of time spent outside of a work environment, which can jeopardize one's health, social and economic conditions over the life course [30]. So far, there is limited research on the interplay between this form of disability and the chances of having children. We used nationwide data from Sweden to address this research gap.

Methods

Aims

The aim of this study is to examine the relationship between disability and the chances of having children, as well as to assess whether the timing of a disability is linked to the timing of having a first child. We addressed this aim by answering the following research questions.

1) To what extent do people with disabilities become parents?

2) What is the interplay between the timing of receiving a first disability benefit and the timing of having a first child?

Design And Study Setting

In this longitudinal cohort study, we used national register data that consist of all people (n = 440,202) born in Sweden from 1968 to 1970. From this birth cohort, we excluded 146,946 people because some were born abroad, died or emigrated during the observation time. A total of 293,256 people with whom we studied through 2010. The youngest were 39 years old and the oldest were 42 years old. All data was obtained from the Longitudinal Integration Database for Health Insurance and Labour Market Studies (LISA database). Our data consists of information on total population, disability benefits status, number of children, sex, year and country of birth. All data was anonymised by Statistics Sweden and made available for analysis through the Swedish Initiative for Research on Microdata in Social and Medical Sciences (Umeå SIMSAM Lab) [31].

Study Variables

Our two major study variables were: becoming a parent or not, and receiving a disability benefit or not. The variable of "becoming a parent" was first considered binary, which indicated whether an individual had any children or not during the observation time. We further stratified this variable into five age groups based on age at having a first child: 13–20, 21–25, 25–30, and 31–35 and 36–42 years old. These age cut-off points were predetermined based on the observed variations in the age of having a first child, reported both in Figs. 2–5 and in Table 1.

We used the variable “receipt of disability benefits during the study duration” to indicate disability status. Eligibility for these benefits is obtained through a medical examination indicating diminished health and work capacity[26–29]. During the study duration, there have been changes in the terminology used to refer to disability benefits. From the period of 1990 to 2002, these benefits were collectively referred to as disability pension and they were awarded to medically eligible people aged between 16 and 64 years [26–29]. From 2003 on, the minimum age limit was raised to age 19 years old and the term “disability pension” was replaced with “activity compensation” for the benefits payable to people aged 19–29, and “sickness compensation” for benefits payable to people aged 30–64. Even though terminology changed based on age of receiving the benefits, the medical requirements remain as explained above. In this study, we use the term “disability benefits” as an umbrella term that includes people that received disability pension, activity compensation, and sickness compensation. We coded the individuals who received disability benefits “yes” from their first year of receiving the benefits; we coded those who did not receive disability benefits during the entire study duration “no”. For this study, the population age at first receipt of disability benefits ranged between 20 and 42 years. Those aged 20 years might include people that started on disability benefits before this age, as this is when they first appear to have this benefit in the LISA database following its establishment in 1990. To assess whether the chance of having children differed based on age at starting to receive benefits, we created four age groups: ages 20–25, 25–30, 31–35 and 36–42. The other covariate included was year of birth, ranging between 1968 and 1970.

Statistical Analyses

Descriptive statistics were performed using frequency tables and cross tabulation to give an overview of the dataset. We graphically plotted the proportion of childlessness among men and women by year of disability benefits (Fig. 1). We further examined the proportion that has first child at a specific age by year of receiving the first disability benefit (Fig. 2). We plotted Figs. 3 to visualise the proportion that receives their first disability benefits at a specific age by age of first child. In Figs. 4 and 5, we plotted heat maps to assess patterns of the exact timing of both disability benefits and first child.

Logistic regression analysis was performed for men and women separately. The multivariable models simultaneously included all study covariates, (Table 2). We performed more logistic regression assessing the association between having a disability at ages 20–25 and later having a child. In addition, we investigated the chance of later use of disability benefits comparing those that had a first child at 13–20 years to those within the rest of the same sex study population.

Using contingency tables, we assessed whether there were differences between the observed and the expected values for age at of disability and age of first child for both men and women. In addition, a chi2 test was used and p-value examined to assess when the differences were statistically significant. Next, using multinomial logistic regression, we estimated the chance of having a first child at ages 13–20, 21–25, 26–30, 31–35 and 36–42 years based on the age of starting on disability benefits. This analysis was performed separately for men and women, and findings are reported in Tables 7. In all of the regression results, we report odds ratios (ORs) with 95% confidence intervals (CIs) and statistical significance set at $p < 0.05$. We performed all statistical analyses using the R software package.

Results

Among the study population, childlessness was more than double among people with disabilities compared to those without disabilities. For those with a disability, 61% had at least one child compared to 82% without a disability. The proportion of people with disabilities that had a first child at 13–20 years of age was more than twice that of their non-disabled counterparts (10% vs. 4%, Table 1). The number of men was slightly higher than that of women (51% vs. 49%) even though women were over-represented in the category of those with disability benefits (64%) compared to men

(36%). The number of new recipients of disability benefits was higher in the 1968 birth cohort 36% compared to 33% and 31% for the birth cohort 1969 and 1970, respectively (Table 1).

Table 1
The distribution of Swedish men and women born between 1968–1970 by selected demographic characteristics presented for those with or without disability (N = 293 256)

Descriptive		No Disability	Disability	Total
		N (%)	N (%)	N (%)
Any children	No	48 655 (18)	7 244 (39)	55 899 (19)
	Yes	225 813 (82)	11 544 (61)	237 357 (81)
Number of children	1	40 726 (15)	2 990 (16)	43 716 (15)
	2+	185 087 (67)	8 554 (46)	193 641 (66)
Age at first child	No Child	48 655 (18)	7 244 (39)	55 899 (19)
	13–20	10 620 (04)	1 887 (10)	12 507 (04)
	21–25	60 570 (22)	5 004 (27)	65 574 (22)
	26–30	72 162 (26)	2 650 (14)	74 812 (26)
	31–35	56 987 (21)	1 296 (07)	58 283 (20)
	36–42	25 474 (09)	707 (04)	26 181 (09)
Sex	Men	143 951 (52)	6 736 (36)	150 687 (51)
	Women	130 517 (48)	12 052 (64)	142 569 (49)
Year of Index's birth	1968	93 893 (34)	6 823 (36)	100 716 (34)
	1969	89 358 (33)	6 164 (33)	95 522 (33)
	1970	91 217 (33)	5 801 (31)	5 801 (33)
Taking into account all children reported by 2010 at end of the follow-up				

Figure 1 shows that childlessness was higher among men compared to women. Childlessness was highest among those that received disability benefits in their early 20 s, of whom about 90% remained childless. However, a rapid decrease in childlessness seemed to correspond with starting to receive disability benefits later. As reference, the proportion childless non-disabled group is added to the graph as dotted lines.

Figure 2 shows the timing of the first child for recipients of their first disability benefits at different ages in the differently coloured lines. As an example of interpretation, over 7% of the people receiving first disability benefits at age 35 (orange line) had their first child at 22 years of age. For the non-disabled people (green line) the occurrence of having a first child is spread out over the length of the reproductive period. The situation is strikingly different, especially for those that began receiving disability benefits early (blue line, at age 20), of which very few had a first child. This is in sharp contrast to those that received disability benefits late (both black and orange lines, ages 30 and 35) among whom a large proportion had a child at a young age compared to non-disabled people.

Figure 3 shows the timing of first disability benefits by age of first child. As an example of how to interpret this figure, about 1.5% of individuals that had their first child at 20 years of age got their first disability benefits at age 37. Those that never had a child (green line) started on disability benefits at a relatively early age. People that eventually had a child were unlikely to get disability benefits early. However, this pattern changed quickly for those that had a child at 20 years of age (blue line) with a higher rate of getting disability benefits than other age groups. Those that had a child late (age 30 and 35, black and orange lines) were not likely to get disability benefits.

Figures 4 and 5 indicate that both men and women that received disability benefits between 20 and 22 years of age almost never had children at all during our follow-up duration. These two figures also show overall that people who started on disability benefits at an early age were less prone to having children. However, those that had children early were more likely to receive disability benefits later. Among women we observe a diagonal pattern revealing that the chance of having children was very low just before starting on disability benefits and increased when they received a first benefit, this pattern is not evident among men (Fig. 5).

The multivariable logistic regression results presented in Table 2 we observed that men and women who received their first disability benefits at ≤ 25 years of age were significantly less likely to become parents compared to people that did not receive disability benefits during the study duration. However, in Table 3, individuals that had a first child at ≤ 25 years of age were at significantly higher odds of getting disability benefits later compared to those that were childless at the end of the observation time.

Table 2
Having disability benefits early later child

	Men (N = 150 686)	**Women (N = 142 569)**
	OR (95% CI) p-values	OR (95% CI) p-values
Disability benefits: No	1.00	1.00
at 20–25 year	0.04 (0.03–0.04)***	0.07 (0.06–0.07)***
Year of birth 1968	1. 00	1. 00
1969	0.97 (0.94–0.99)*	0.96 (0.92–0.99)*
1970	0.91 (0.88–0.94) ***	0.96 (0.92–0.99)*
OR = Odds Ratio; CI = Confidence Interval; *** p < 0.001; ** p < 0.01; * p < 0.05		

Table 3
Having children early and later use of disability benefits

	Men (N = 150 686)	Women (N = 142 569)
	OR (95% CI) p-values	OR (95% CI) p-values
Age at having a first child		
No child	1.00	1.00
≤ 25	2.15 (1.87–2.47)***	2.36 (2.23–2.49)***
Year of birth		
1968	1. 00	1. 00
1969	0.98 (0.92–1–04)	0.93 (0.89–0.98)***
1970	0.95 (0.89–1.01)	0.82 (0.79–0.86)***
OR = Odds Ratio; CI = Confidence Interval; *** p < 0.001; ** p < 0.01; * p < 0.05		

The logistic regression results in Table 4 indicated that receiving disability benefits was associated with reduced chances of having children in both men and women. Looking at age of starting to receive a disability benefit, regardless of sex, those that started to receive disability benefits early had lower odds of having children compared to those that started at a later age. Compared to the birth cohort of 1969, men and women born in 1969 and 1970 had lower chances of having children.

Table 4
Logistic regression results on the chances of having children. Results presented for the overall population, for men and women born in 1968–1970

Demographic factors		Men (N = 150 686)	Women (N = 142 569)
		OR (95% CI) p-values	OR (95% CI) p-values
Age at disability benefits	No	1.00	1.00
	20–25	0.04 (0.03–0.04) ***	0.06 (0.06–0.07) ***
	26–30	0.17 (0.14– 0.19) ***	0.26 (0.23–0.29) ***
	31–35	0.32 (0.29–0.35) ***	0.49 (0.46–0.53) ***
	36–42	0.39 (0.36–0.43) ***	0.68 (0.63–0.74) ***
Year of birth	1968	1.00	1.00
	1969	0.97 (0.94–0.99) ***	0.96 (0.92–0.99) ***
	1970	0.90 (0.89–0.93) ***	0.95 (0.92–0.99) ***
OR = Odds Ratio; CI = Confidence Interval; *** p < 0.001; ** p < 0.01; * p < 0.05. (Age at disability benefits starts from 20 because LISA database was available from 1990 and the youngest of this birth cohort was 20 years)			

From the contingency tables reported in Tables 5 and 6, there were larger differences between the observed and expected values indicating that timing of disability benefits is independently distributed across the different age intervals of

having a first child. Evidence from the chi2 test showed that the differences were statistically significant at p-value less than 0.05.

Table 5
The contingency table for men

		No disability benefits	20–25	26–30	31–35	36–42
Age at birth of first child		N(%)	N(%)	N(%)	N(%)	N(%)
No child	Observed	32 873 (89)	1 550 (04)	550 (01)	973 (03)	897 (02)
	Expected	35 196	423	210	498	513
13–20	Observed	2 288 (91)	14 (01)	31 (01)	81 (03)	100 (04)
	Expected	2 402	29	14	34	35
21–25	Observed	23 956 (96)	56 (0)	104 (0)	381 (02)	456 (02)
	Expected	23 838	289	142	337	347
26–30	Observed	35 964 (99)	47 (0)	75 (0)	303 (01)	330 (01)
	Expected	35 078	425	209	511	511
31–35	Observed	32 586 (99)	35 (0)	55 (0)	201 (01)	198 (01)
	Expected	31 596	383	188	447	460
36–42	Observed	16 284 (98)	41 (0)	42 (0)	99 (01)	117 (01)
	Expected	15 842	192	94	224	231

Table 6
The contingency table for women

Age at birth of first child		Age at first disability pension				
		No disability benefits	20–25	26–30	31–35	36–42
		N(%)	N(%)	N(%)	N(%)	N(%)
No child	Observed	15 782 (83)	1 049 (04)	479 (03)	939 (03)	807(04)
	Expected	17 445	204	184	576	646
13–20	Observed	8 332 (83)	61 (01)	195 (02)	700 (07)	705 (07)
	Expected	9 148	107	97	302	339
21–25	Observed	36 614 (90)	165 (0)	376 (01)	1 669 (04)	1797 (04)
	Expected	37 187	436	393	1 228	1378
26–30	Observed	36 198 (95)	130 (0)	146 (0)	598 (02)	1021 (03)
	Expected	34 873	409	368	1 151	1292
31–35	Observed	24 401 (97)	76 (0)	120(0)	219 (01)	392 (02)
	Expected	23 077	270	244	762	855
36–42	Observed	9190 (96)	48 (01)	62 (01)	184 (02)	114 (01)
	Expected	8787	103	93	290	326

To further investigate the results from the contingency tables, multinomial logistic regressions for men and women were conducted with age group of child birth as independent variable (Table 7). The results indicate that those that receive a disability between ages 20–24 have a low chance of ever having a child compared to those with no disability. This effect reduced with higher age of receiving disability and women getting a disability benefit at ages 31–42 and men at ages 36–42 are more likely to have had a child between ages 13–20 compared to those that never received a disability benefits. This is in line with the results from the other logistic regressions and graphs.

Table 7
Multinomial logistic regression results for men and women

Men			**Age at disability pension**		
Age childbirth	Intercept	20–24	25–30	31–35	36–42
	ORS (p-value)	ORS (p-value)	ORS (p-value)	ORS (p-values)	ORS (p-value)
13–20	0.07***	0.13***	0.81	1.19	1.61***
21–25	0.73***	0.05***	0.26***	0.54***	0.69***
26–30	1.09**	0.03***	0.12***	0.28***	0.34***
31–35	0.99	0.02***	0.10***	0.21***	0.22***
36–42	0.49***	0.05***	0.15***	0.21***	0.26***
Women			Age at disability pension		
Age childbirth	(Intercept)	20–24	25–30	31–35	36–42
	ORS (p-value)	ORS (p-value)	ORS (p-value)	ORS (p-values)	ORS (p-value)
13–20	0.53***	0.11***	0.77**	1.41***	1.65***
21–25	2.32***	0.07***	0.34***	0.77***	0.96
26–30	2.29***	0.05***	0.13***	0.28***	0.55***
31–35	1.55***	0.05***	0.16***	0.15***	0.31***
36–42	0.58***	0.08***	0.22***	0.34***	0.24***
OR = Odds Ratio; CI = Confidence Interval; *** p < 0.001; ** p < 0.01; * p < 0.05					

Discussion

Our register data for the birth cohorts of 1968 to 1970 showed that, overall, receiving disability benefits was significantly associated with reduced chances of having children. We also found a complex relationship receiving disability and having a first child. On one hand, getting disability at a very early age was associated with extremely low chances of having children over the life course, yet on the other hand, people that had a first child early (13–20 years of age) were likely to receive disability benefits during their 30 s and 40 s. We found that men with disabilities were less likely to have children compared to women with disabilities and to men and women without disabilities.

Our finding that receiving disability benefits was associated with significant reduction in chances of having children supports findings from previous studies [15–17]. The association between disability and low chances of having children could very well be explained by several factors including economic barriers as Oppenheimer's theory suggests [6–8]. In addition, assortative mating [10], biological barriers and negative societal attitude could negatively influence the likelihood of becoming a parent for people with disabilities [20–23].

Early use of disability benefits was associated with low chances of becoming parents. An early start on disability benefits might contribute to childlessness as it implies prolonged ill health, and socio-economic constraints, factors that influence parental status. Moreover, the majority of individuals who start on disability benefits continue to receive them

on a long-term basis, with an outflow rate at just about three percent [30]. We also noted that becoming a parent very early was strongly associated with later use of disability benefits. Mental health problems were shown to independently predict early parenthood in Sweden [32]. Mental health problems constitute a common diagnostic group for the award of disability benefits among young people [33–34]. It is possible that early parenthood increases stress which leads to chronic mental health problems. Other research have reported that young parents tend to come from socially disadvantaged background [35]. A combination of mental health problems and prolonged socioeconomic disadvantage might increase the odds that those who have a first child early end up using disability benefits later in life.

Surprisingly, we observed that once women started to receive disability benefits their chances of having children increased, as represented by a diagonal pattern observed in Fig. 4. This might imply that for women, the period before getting a diagnosis is characterised with even more financial uncertainty leading to postponement of child bearing. However, starting to receive disability benefits might offer some financial security making it possible for women to consider having a first child. This finding is reflected in the reports that show women in the Nordic countries postponing childbearing until they were firmly established in the labour market and could be assured of financial security via parental leave insurance [36–37].

Our study also identified major sex differences in the chances of having children. These chances were much lower for men with disabilities compared to women with disabilities or to men and women without disabilities. Literature suggest that entry to a stable partnership union requires a strong financial underpinning and more occupational stability for men compared to women [6–7]. Limited male entry into partnership formation will subsequently result in low number of children for men. However, it is also important to note that our study population consisted of a higher proportion of men than women, implying a surplus of men on the partnership market, which might further constrain the chances of men with disabilities.

We noted that the odds of having children reduced in the younger birth cohort of 1969 and 1970 compared to people born in 1968. We find no known social economic changes during this time to explain these parental status differences by birth cohort. It is therefore possible that this association is due to random variation.

Strengths And Limitations Of The Study

The main strength of this study is the access to a large longitudinal data set that gave us an opportunity to observe a total population for a long duration. Moreover, using register data ensured minimal loss to follow-up, as data on the use of disability benefits and having children was available for all cohorts. Even though our models excluded some people due to missing data, there is no reason to suspect that missing data differed by disability status.

We measured disability based on different disability benefits. However, it is possible that the diagnoses leading to the award of sickness compensation is different from the diagnoses leading to activity compensation. We speculate that such differences could have implications on the possibilities of family formation and, subsequently, parental status. For example, having a chronic developmental disability as opposed to having a musculoskeletal problem could have different social and cognitive effects on average capabilities, and as such, might impact entry into partnership and, subsequently, having children.

Though we had access to longitudinal data, we chose an analytical approach that offers more flexibility to measure the complex interplay between disability and parental status. We chose our regression methods based on the study aim and nature of the variable “receiving disability benefits.” We considered the following: 1) Receiving disability benefits can be a process that takes several years so the exact date of when one gets a disability cannot be determined, 2) the probability of receiving disability benefits is highly dependent on the individual’s own socioeconomic background with largely unmeasured factors, and 3) disability benefits recipients might have a wide spectrum of health circumstances

that greatly varies in frequency depending on the age of the individuals, 4) we could also not rule out the fact that parental status might influence the probability of getting disability benefits. Many longitudinal statistical methods, such as survival analysis, which could be a potential candidate here require that the “states” (here disabled/non-disabled) are well-defined both in character and timing, which is not the case here. Based on the above reasons, we preferred using descriptive and regression methods that measure the association, rather than attempting to establish causality between disability and parental status.

Conclusion

This study shows a strong association between receiving disability benefits and reduced chances of having children. Also, having children very early in life was associated with increased risk of using disability benefits later. Moreover, men with disabilities were at reduced chances of having children compared to women with disabilities and to men and women without disabilities. Our findings support policies aimed at mitigating early use of disability benefits, as this may promote parenthood. Our results further highlight a need to strengthen public health policies geared at reducing early parenthood and support for young parents. This will not only promote individual health, but could contribute to a reduction in early exits from work. Future research is needed to further clarify the interplay between use of disability benefits and all factors related to reproductive health, marriage, and parenthood and family relationships among people with disabilities, as such evidence will help inform both public health and family policies.

List Of Abbreviations

CI: - Confidence interval

LISA - Longitudinal Integration Database for Health Insurance and Labour Market Studies

SIMSAM - Swedish Initiative for Research on Microdata in Social and Medical Science

Declarations

Ethics approval and consent to participate

The Regional Ethical Vetting Board approved all research based on data from the Umeå SIMSAM Lab, including the present paper (Dnr 2010-157-31 Ö). Statistics Sweden made the data anonymous before making it available for this study, therefore obtaining the informed consent for each individual was neither possible nor necessary with this data.

Availability of data and materials

The datasets supporting the conclusions of this article are available in the Statistics Sweden repository and can be made available to researchers in accordance with the ethical and legal restrictions regarding the Swedish Public Access to Information and Secrecy Act data. Statistics Sweden is a Swedish government agency responsible for official statistics in Sweden. To request access to this data contact: information@scb.se, + 46104795000. Researchers requesting access to this data should also have obtained ethical approval from the Swedish Central Ethical Review Board, its contact is: registrator@etikprovning.se, telephone: +46104750800.

Competing interests

No known competing interest

Funding

The salary for FN, EL and LV's to contribute to this study is financed by a project headed by Lotta Vikström, that has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme, Grant Agreement No. 647125, 'DISLIFE Liveable Disabilities: Life courses and opportunity structures across time', 2016–2021. Lotta Vikström contribution is also partly financed by her grant from Wallenberg Foundation (*Stiftelsen Marcus och Amalia Wallenbergs Minnesfond*, MAW 2019.0003). The funders had no role in the study design, data collection, data analysis, data interpretation, or writing of the report.

Authors' contributions

All authors participated in developing the research idea, interpreting the research findings and the revision of the manuscript. All authors have read and approved the manuscript.

Acknowledgments

The Umeå SIMSAM Lab data infrastructure used in this study was developed with support from the Swedish Research Council (grant number 2008–74919) and with strategic funds from Umeå University.

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Figures

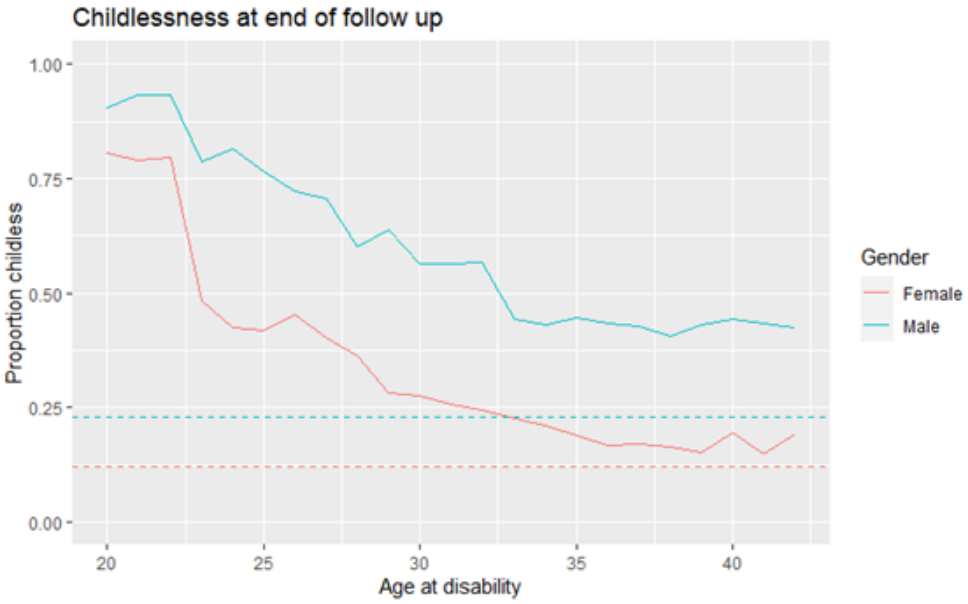

Figure 1

Childlessness by age at starting on disability benefits

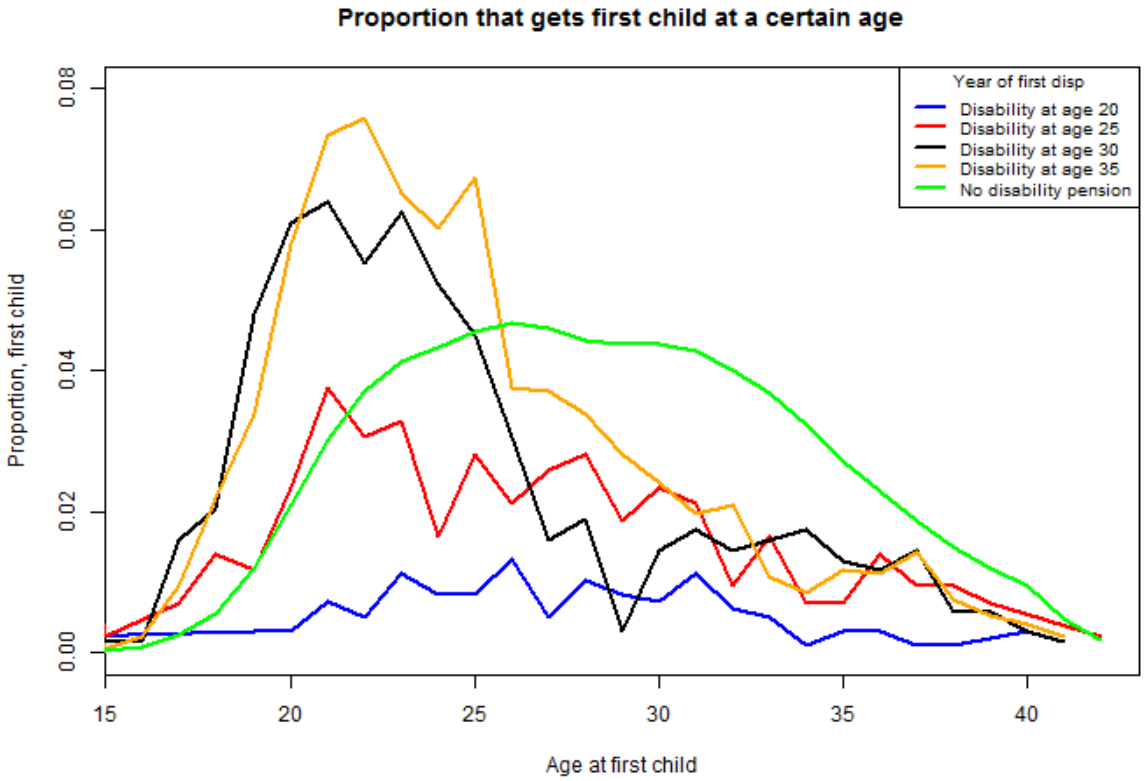

Figure 2

The proportion that gets their first child at a specific age divided by age of first disability benefits.

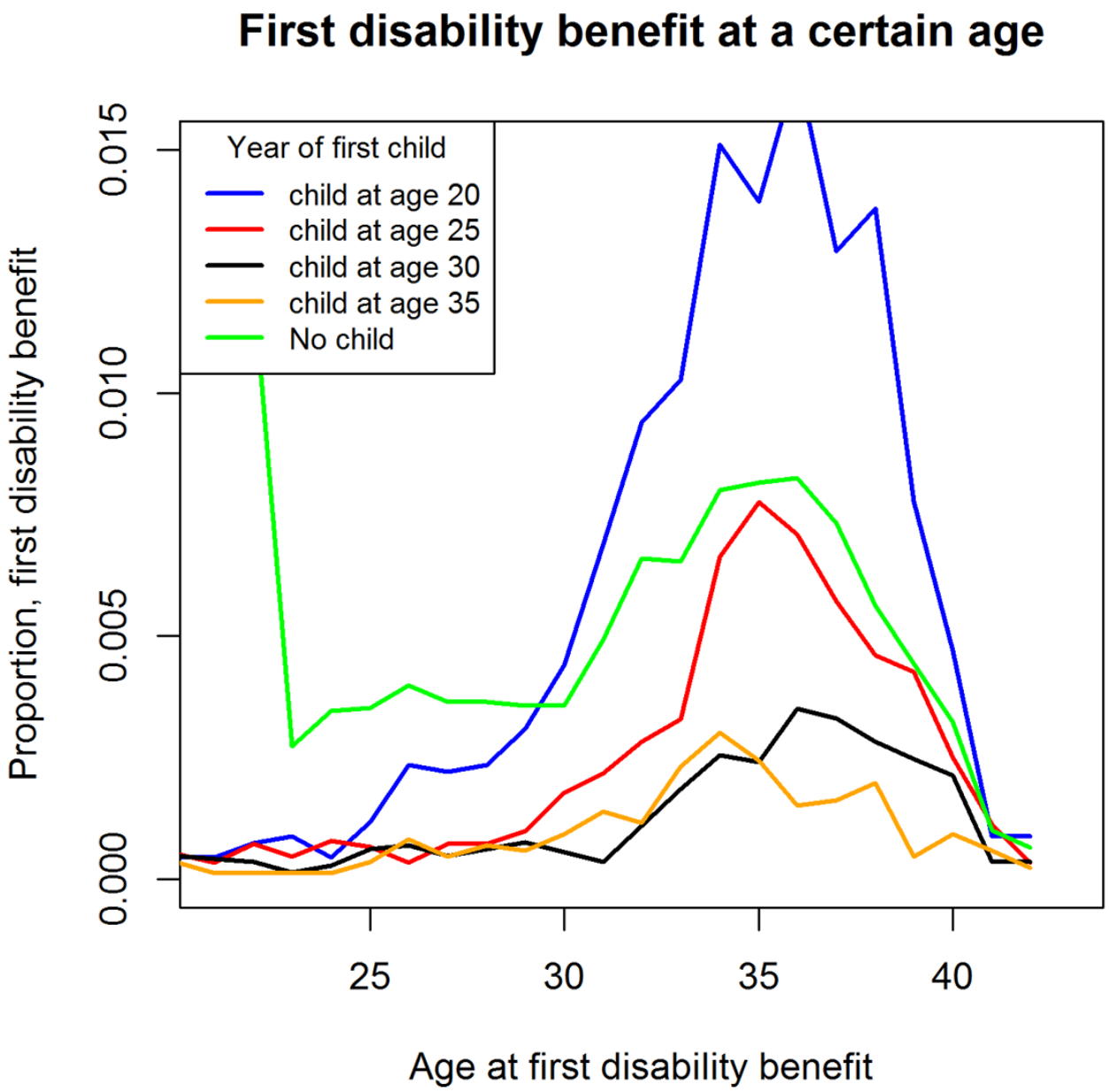

Figure 3

The proportion that gets their first disability benefits at a specific age divided by age of first child

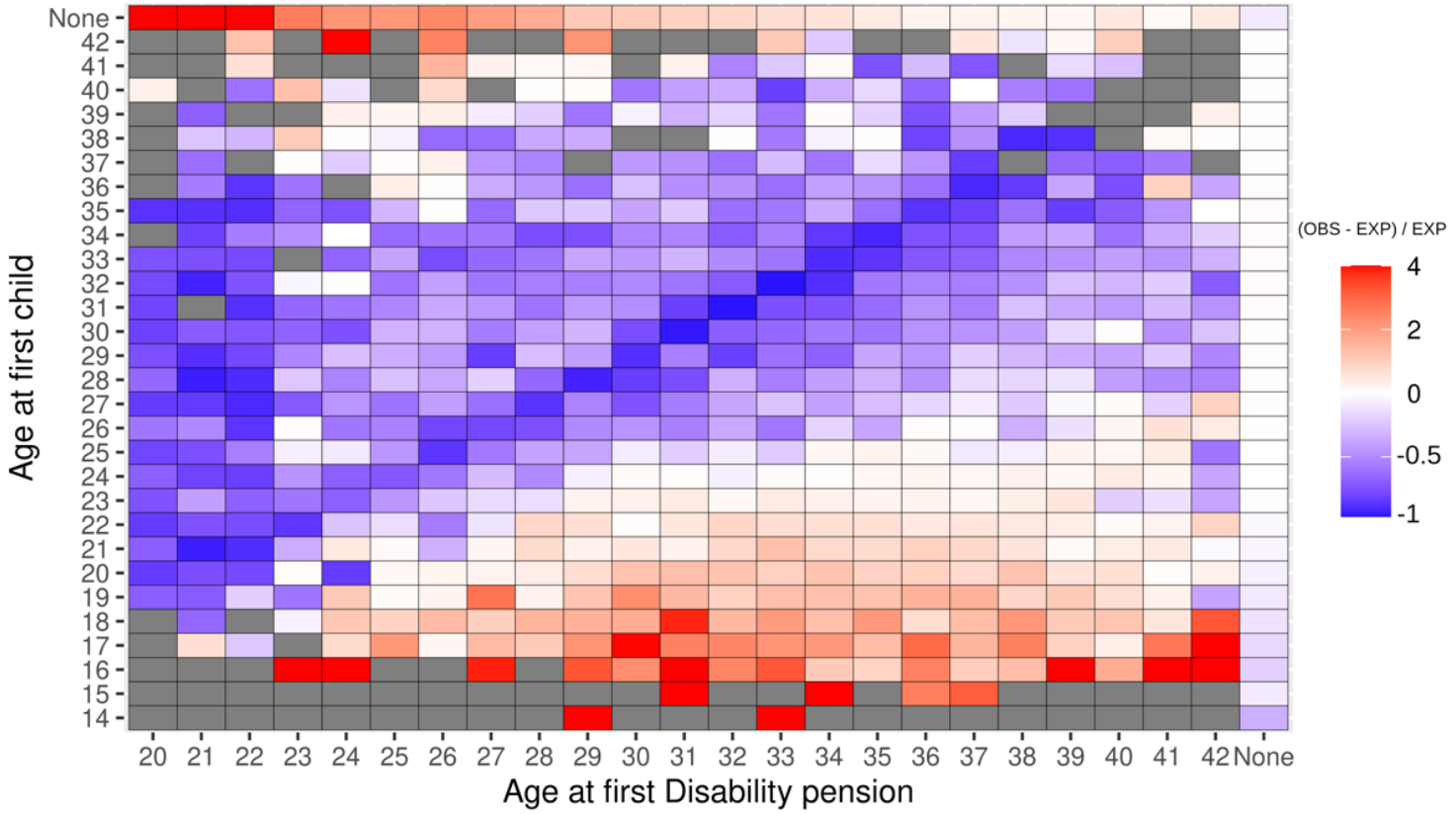

Figure 4

The proportion of women getting a first disability benefit at a specific age of having a first child

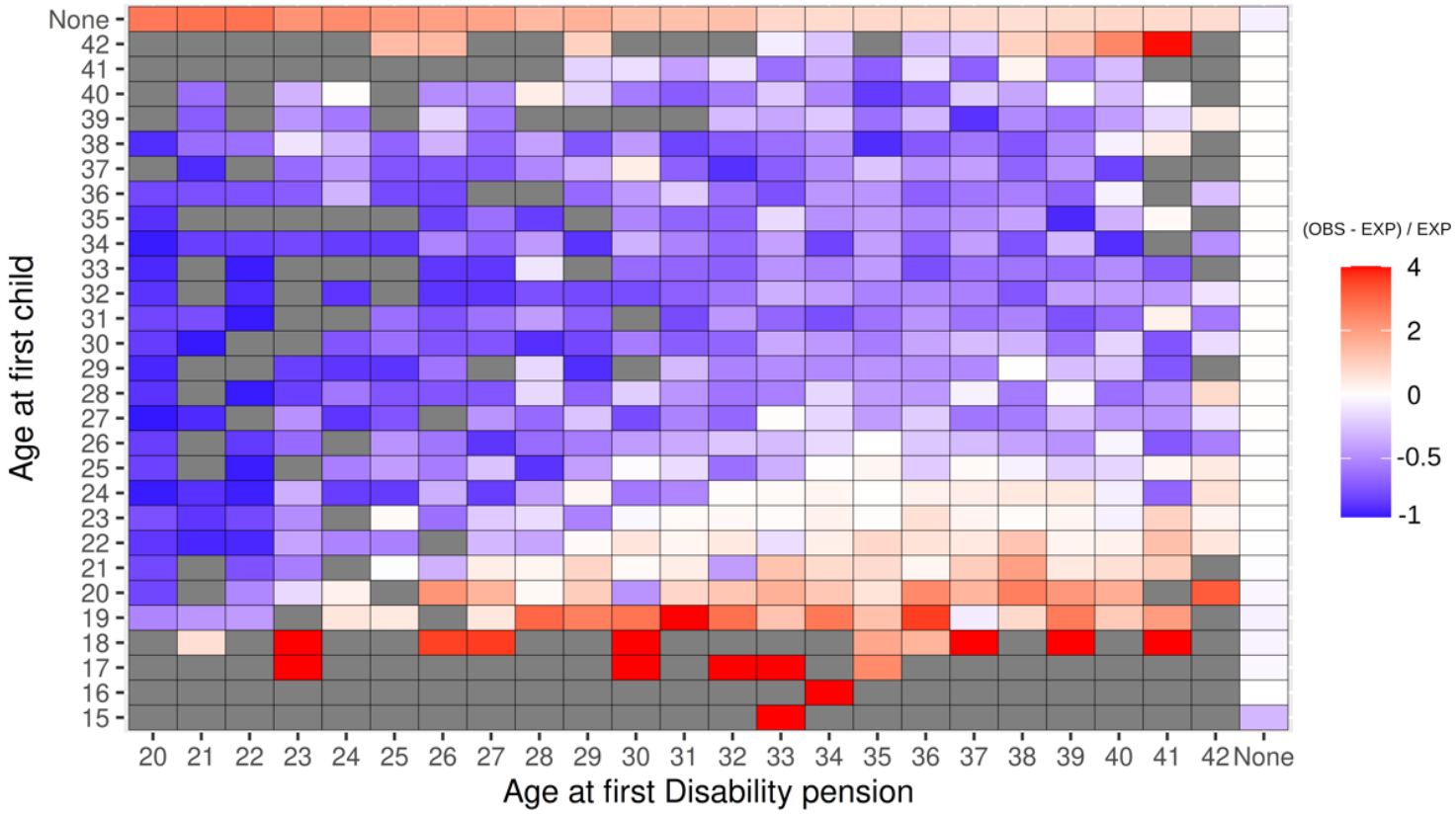

Figure 5

The proportion men getting a first disability benefit at a specific age of having a first child