8 MARRIAGE, HAVING CHILDREN

8.1 THE EFFECTS OF TEENAGE MOTHERHOOD

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This chapter looks at the relationship between teenage motherhood, female labour supply and self-declared late-life health. While there is ample evidence on the negative consequences of teenage motherhood, we know surprisingly little about the channels of these effects. Teenage mothers not just have their first child at an early age but also have more children during their lives than women who delay childbearing to their adult years. In this research we aim at investigating whether having a higher average number of children could be a potential channel of the long term effects of teenage motherhood.

Measuring the effects of teenage motherhood

An extensive literature considers the effects of teenage motherhood; however, the identification of its causal impacts is not straightforward. Women having their first child before age 20 are inherently different from women who have their first child later or might not have a child at all. Some of these differences might be observed for the researcher (i.e. family background), most of these however are unobserved and thus cause a selection bias. The literature applies three identification strategies to solve the selection problem and pin down the causal effects of teenage motherhood (statistical matching, twin fixed effects, instrumental variables), and, these methods lead to inconsistent conclusions. Several authors agree that teenage motherhood has negative effects on female health (*Webbink et al.* 2008), and these effects can even be detected late in life (*Angelini–Mierau,* 2015). However, there is no agreement on its labour market and education effects, and we know especially little about the potential channels of its impact.

Teenage mothers have on average more children during their lives than women who delay motherhood to post-adolescence. Theoretically, having more children, independently of the timing of the first birth, could be a reason why teenage mothers are less likely to be employed or have poorer health later in life. This investigates whether having a higher number of children could be a potential channel of the long term effects of teenage motherhood.

Data and methods

We use the second and the third wave of the European SHARE survey.[1] The sample consists of 12,650 women from 14 European countries who were born between 1920 and 1959 and were 50–89 years old when the data of the third wave (SHARELIFE) were collected.[2] The data allow us to control for

1 A Survey of Health, Ageing and Retirement in Europe (SHARE). See more in *Börsch-Supan et al.* (2013).

2 Those having really poor health in childhood or later are less likely to be still alive and be in our sample; thus, the sample is selected in this respect.

the childhood socio-economic background, health and cognitive abilities of women, and controlling for this rich set of childhood characteristics hopefully decreases the estimation bias due to the selection of teenage mothers.

Building on *Angelini–Mierau* (2015), we are estimating the relationship between having the first child before age 20, and, our two outcome variables (life-long employment history of women, late life health) using linear probability models. We extend their empirical strategy with two elements. First, in addition to their measure of self-declared health status, we define an outcome variable that captures the probability of employment between ages 20–65. Second, we are investigating whether the baseline relationship changes between teenage motherhood and the two outcome variables if we control for the number of children women chose to have.

Table 8.1.1 compares the explanatory variables between teenage mothers and women who either had their first child after age 20, or did not have a child (comparison group). Teenage mothers tend to come from lower socio-economic backgrounds but their childhood health has not been worse than those of the comparison group. Teenage mothers are less likely to have one or two and more likely to have three or more children than women in the comparison group.

Table 8.1.1: Background characteristics and fertility of women

	Comparison group	Teenage mothers	Two-sided t-test p-values
Fertility			
Has child	0.88	1.00	0.000***
One child	0.16	0.09	0.000***
Two children	0.41	0.38	0.079*
Three children	0.19	0.29	0.000***
Four children	0.07	0.12	0.000***
Five or more children	0.05	0.13	0.000***
Age at the time of the survey	66.30	64.57	0.000***
Childhood characteristics: family			
Parents smoked	0.61	0.61	0.801
Parents were heavy drinkers	0.08	0.13	0.000***
Parents had mental problems	0.03	0.03	0.170
Mother lived with the child	0.96	0.95	0.112
Father lived with the child	0.92	0.84	0.000***
Childhood characteristics: housing			
No. of rooms per person in the family	0.73	0.62	0.000***
Bathroom	0.32	0.24	0.000***
Cold running water	0.69	0.64	0.002***
Hot running water	0.34	0.24	0.000***
Inside toilet	0.52	0.41	0.000***
Central heating	0.18	0.13	0.000***

	Comparison group	Teenage mothers	Two-sided t-test p-values
Childhood characteristics: number of books at home			
0–10	0.41	0.5	0.000***
11–25	0.23	0.26	0.075*
26–100	0.23	0.18	0.000***
101–200	0.07	0.04	0.000***
200+	0.06	0.04	0.001***
Childhood characteristics: higher skills relative to peers			
Math	0.32	0.25	0.000***
Grammar	0.41	0.31	0.000***
Childhood characteristics: occupation of the head of the household			
Legislator, senior official or manager	0.05	0.03	0.021**
Professional	0.04	0.01	0.000***
Technician or associate professional	0.05	0.02	0.001***
Clerk	0.06	0.03	0.000***
Service, shop or market sales worker	0.08	0.07	0.200
Skilled agricultural or fishery worker	0.28	0.26	0.432
Craft or related trades worker	0.21	0.23	0.109
Plant/machine operator or assembler	0.05	0.06	0.222
Elementary occupation	0.16	0.24	0.000***
Childhood characteristics: childhood health in general			
Excellent or very good	0.34	0.35	0.449
Childhood health: prevalence of illnesses			
Infectious disease	0.84	0.83	0.694
Polio	0.01	0.01	0.593
Asthma	0.02	0.02	0.564
Respiratory problems	0.03	0.03	0.794
Allergies	0.03	0.04	0.717
Severe diarrhoea	0.01	0.01	0.796
Meningitis/encephalitis	0.01	0.01	0.764
Chronic ear problems	0.03	0.03	0.146
Speech impairment	0.00	0.01	0.110
Difficulty seeing even with eyeglasses	0.02	0.02	0.585
Severe headaches or migraines	0.05	0.06	0.323
Epilepsy, fits or seizures	0.00	0.01	0.331
Emotional, nervous, or psychiatric problems	0.01	0.02	0.219
Broken bones, fractures	0.06	0.06	0.765
Appendicitis	0.09	0.13	0.001***
Childhood diabetes	0.00	0.00	0.303
Heart trouble	0.01	0.01	0.457
Leukaemia or lymphoma	0.00	0.00	0.616

No. of observations: comparison group: 11,669 teenage mothers: 981.
Sources: Own estimation from the SHARELIFE data.

Results

The first three columns of *Table 8.1.2* show the relationship between teenage motherhood and the probability of employment while the second three columns of the table show the relationship between teenage motherhood and

late-life good health. Having no control variables in the models, both the probability of employment and late-life good health is negatively correlated with teenage motherhood (*column 1 and 4*). The negative relationship prevails even after controlling for a rich set of childhood characteristics of women (column *2 and 5*): teenage mothers work with a 4-percentage-point lower probability throughout their active years and they are 6 percentage points less likely to assess their health as good at the time of the data collection (in ages 50–89) than the comparison group. Expressed in percentages, the effect on employment is –6% while the effect on self-assessed health is –20%.

Table 8.1.2: The relationship between teenage motherhood and the outcome variables

	The effects of teenage motherhood on the probability of					
	employment			late-life good health		
	(1)	(2)	(3)	(4)	(5)	(6)
Coefficient of teenage motherhood	–0.055*** (0.011)	–0.043*** (0.011)	–0.004 (0.011)	–0.091*** (0.013)	–0.061*** (0.013)	–0.066*** (0.013)
Control variables						
Age, age squared	x	x	x	x	x	x
Country fixed effects	x	x	x	x	x	x
Childhood controls*		x	x		x	x
No. of children			x			x
No. of observations	12,650	12,650	12,650	12,650	12,650	12,650

* Childhood controls: all variables that are listed in *Table 8.1.1*. Robust standard errors in parentheses.

The average probability of employment is 0,502 (standard error: 0,003), the average probability of good late-life health 0,285 (standard error: 0,004) in the comparison group. The comparison group contains women having their first child after age 20 and childless women. Result are similar if childless women are not included in the sample.

Sources: Own estimation from the SHARELIFE data.

The 3rd and 6th columns extend the models with the number of children women had during their lives. Controlling for the number of children practically eliminated the negative effects of teenage motherhood on the probability of employment (3rd column) while it has not changed the effect on late-life good health (6th column). It seems that the number of children could be a potential channel of the effect of teenage fertility on employment, while teenage motherhood affects late-life health outcomes through other channels.

Conclusions

It has to be emphasized again that this chapter does not claim to identify the causal effects of teenage motherhood. Although the SHARE data allow us to control for a rich set of childhood characteristics of women, these characteristics can only explain a small share of the variation of teenage motherhood.[3] In spite of this, it is interesting that controlling for the number of children

3 Teenage motherhood as a binary variable regressed on the explanatory variables of our models gives $R^2 = 0{,}03$ and $F = 7$, both indicates really poor performance.

eliminates the negative effects of teenage motherhood on employment while it does not change the effect on self-assessed health. The next step of this research is to set up a credible identification strategy to look at the causal effects of teenage motherhood on late-life outcomes, and, to include objective measures of late-life health.

References

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