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Social inequalities in teenage fertility outcomes: childbearing and abortion trends of three birth cohorts in Finland

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Social Inequalities in Teenage Fertility Outcomes: Childbearing and Abortion Trends of Three Birth Cohorts in Finland

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CONTEXT: Teenagers of low socioeconomic status are more likely to get pregnant, and less likely to choose abortion, than more privileged teenagers. Few studies have used longitudinal data to examine whether these differences persist as overall teenage pregnancy rates decline.

METHODS: Nationally representative register data from 259,242 Finnish women in three birth cohorts (1955–1959,1965–1969 and 1975–1979) were analyzed using Cox regression to assess socioeconomic differences in teenagers' risks of pregnancy and abortion. Binary logistic regression was used to assess socioeconomic differences in the odds of pregnant teenagers' choosing abortion.

RESULTS: Socioeconomic differences in abortion risk did not change substantially across cohorts; however, differences in the risk of childbirth rose between the fi rst two cohorts and then returned to their earlier level. In all cohorts, teenagers from upper-level employee backgrounds, the most privileged group, had the lowest risks of abortion and childbirth (44–53% and 53–69% lower, respectively, than those for manual workers' children). Teenagers whose parents were lower-level employees or farmers also had reduced risks of both outcomes in all cohorts; results for other socioeconomic groups were less consistent. Pregnant teenagers from upper-level employee backgrounds had 2–3 times the odds of abortion of manual workers' children; the largest difference was found in the 1950s cohort.

CONCLUSIONS: Despite the declining overall teenage pregnancy rate, poorer background continues to be associated with a higher risk of conceiving and of giving birth.

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Socioeconomic background is strongly associated with teenage pregnancies and pregnancy outcomes. Studies in Europe and North America have found teenage pregnancies to be associated with poverty and social exclusion,[1–4] and studies in the United Kingdom,[5–8] the United States,[9,10] the European Union,[11] Sweden[12] and Finland[13] have shown that pregnancies are more common among teenagers of low parental socioeconomic status than high. Furthermore, pregnant teenagers of low socioeconomic status are more likely than those of high socioeconomic status to choose childbirth rather than induced abortion.[6,9,12] Indeed, socioeconomic differences in teenage childbearing rates are usually larger than those in pregnancy rates because of the higher proportion of pregnancies ending in abortions among those from more privileged backgrounds than among those from working-class backgrounds.[1,7,14]

Socioeconomic differences in teenage birth and abortion rates may be due to different levels of sexual health knowledge,[15] varying attitudes,[16] different reproductive strategies that are based on childhood experiences and one's prospects, [17–21] or structural inequality in society.[14] For instance, a British study found that poor female adolescents perceived early parenthood as a good pathway to adulthood when possibilities of obtaining a good education and job were limited.[19]

Using Finnish register data on three female birth cohorts (1955–1959, 1965–1969 and 1975–1979), this study investigates whether teenage pregnancy is associated with socioeconomic status in similar ways across cohorts in Finland, where income inequality is relatively low and a free, high-quality education system offers everyone the possibility of obtaining higher education regardless of family background.

Teenage fertility in Finland

Previous studies have found that teenage fertility behaviour differs by parental socioeconomic status in Finland. Between 1987 and 1998, teenagers of low socioeconomic status had a higher risk of pregnancy than teenagers of high socioeconomic status.[13] In 1991, compared with older mothers, teenage mothers were more likely to come from low socioeconomic backgrounds and to be unmarried.[22] These findings indicate that a less privileged background is associated with a higher risk of teenage pregnancy. Not living with both parents, family dysfunction, psychological problems or bullying during childhood, living in the capital city area or in the most remote areas of Northern Finland, and speaking Finnish

rather than Swedish as one's native language* were also associated with increased risk of pregnancy.[13,23–25]

Teenage pregnancy rates are relatively low in all Nordic countries—for example, they are one-third the rate in the United Kingdom and one-fifth that in the United States.[14] Among Nordic countries, which are very similar in terms of the emphasis placed on gender equality, sex education and easy access to family planning services,[26] Finland has had one of the lowest teenage childbearing rates and the lowest abortion rate (according to rates as calculated on the basis of total populations) since the mid-1980s.[27,28] Between 1976 and 1999, teenage fertility rates in all Nordic countries decreased by more than 50%; during the same time period, abortion rates declined by approximately 40% in Finland and Denmark, and by 20–25% in Norway and Sweden.[27] However, a higher proportion of all abortions were performed for teenagers in Finland than in all other Nordic countries except for Iceland (in the late 1990s and early 2000s, around 20%, compared with approximately 15% in Denmark, Norway and Sweden),[29] which may indicate higher sexual activity or more inconsistent contraceptive use among Finnish teenagers than among teenagers in other Nordic countries.

In Finland, the teenage abortion rate was quite stable between the mid-1970s and the mid-1980s (it varied between 17.9 and 21.2 per 1,000 women aged 15–19); it then declined until 1994 (10.7 per 1,000), and then increased, reaching 14.1 per 1,000 in 1999.[28,30,31] Between 1974 and 1978, the birthrate was higher than the abortion rate, but after 1978, the trend reversed. The teenage birthrate declined steadily from 1975 until 1989 (from 27.0 to 11.4 per 1,000), increased until 1992 (12.4 per 1,000) and then decreased again, reaching 9.8 per 1,000 in 1999.[30]

The increase in abortions in Finland during the mid-1990s may have been due to the economic recession and cuts in sex education, which had been compulsory in schools since 1970.[32] Teenage abortion rates started decreasing again after compulsory sex education was reintroduced in 2001—from 16.3 per 1,000 in 2002 to 12.7 per 1,000 in 2008.[32] Other possible reasons for the increase in abortions are cuts to family planning services and adolescent health services in schools that were due to the recession.[28]

Finnish abortion legislation has been liberal since 1970. An early abortion (initially defined as an abortion up to 16 weeks' gestation, but since 1978 up to 12 weeks') is practically

* In Finland, speaking Swedish is associated with having a wealthier background.

always granted for a woman who applies for it on social grounds.[26] If the woman is younger than 17, or if there is another special social reason for pregnancy termination, abortion can be permitted up to the end of 20 weeks' gestation; if a medical issue is identified in the fetus, abortion is permitted up to the end of 24 weeks.[33] There is no gestational limit if the woman's life or health is at risk.[26] Most teenage abortions take place before the end of 12 weeks: For instance, between 1987 and 2009, only 7% of teenage abortions occurred after 12 weeks' gestation.[28]

Previous research in Finland has focused on teenage pregnancy risk by socioeconomic status,[13] teenage pregnancy outcome comparisons across Nordic countries[27] or the association between age and pregnancy outcomes.[24] However, rarely have associations between socioeconomic status and teenage abortion and childbirth been compared in a single study. In addition, comparing these outcomes across cohorts has often not been possible; reliable, longitudinal data permits the investigation of these trends over time.

In this study, we examine the associations between parental socioeconomic status, the likelihood of teenagers' experiencing a birth or an abortion and the likelihood that those who conceive before age 20 will choose an abortion; we also examine whether these associations vary across cohorts. Other characteristics usually associated with teenage fertility behavior—place of residence,[13,22,24,28] native language and country of birth,[34,35] relationship status,[22] age at pregnancy[24,28] and pregnancy history[28,36]—are controlled for.[*]

On the basis of previous studies,[1,7,19] we expect teenagers of low socioeconomic status to have a higher likelihood of experiencing a pregnancy than teenagers of high socioeconomic status, but we expect teenagers of high socioeconomic status who conceive to have a greater likelihood of terminating the pregnancy than their peers of low socioeconomic status. Childbearing and abortion are studied separately because, given previous studies,[1,7,14] we expect socioeconomic differences to be larger in the childbearing model as a result of the higher proportion of pregnant teenagers of high socioeconomic status who choose abortion. Furthermore, the 1950s cohort was the first to benefit from sex education,[32] and the 1970s cohort suffered from cuts in sex education and family planning services.[28,32,37] As a result, we

[*] Previous work in Finland has indicated that urban teenagers have an elevated risk of abortion,[13,28] teenagers from the capital city area and Northern provinces are at increased risk of pregnancy,[24] teenage mothers are less likely than older mothers to be married,[22] and younger teenagers are more likely than older ones to terminate a pregnancy.[24,28] Studies elsewhere have shown that foreign-born teenagers have a reduced risk of pregnancy[34,35] and that teenage mothers are at high risk of experiencing unintended pregnancies.[36]

expect fewer socioeconomic differences in the 1960s cohort than in the 1950s cohort (because sex education and family planning services were in place throughout the period), and a return to greater differences in the 1970s cohort (because of the cuts in these services).

Methods

Data

This longitudinal study focuses on teenage pregnancies using high-quality population register data on live births and induced abortions[*] in Finland over several decades. Nationally representative data on three birth cohorts (1955–1959, 1965–1969 and 1975–1979) were obtained from the Registry of Induced Abortions, the Medical Birth Registry and the Population Registry of Finland; a comprehensive description of these registries has been published elsewhere.[38] Information from the different registries was linked by Statistics Finland using the women's personal identification numbers. These data were provided to researchers after being anonymized.

The data set consists of two parts. First, an 80% random sample of 91,636 women in the specified cohorts who had had an abortion before age 50 (the expected end of women's fertility) or before the end of 2010 (the most recent year for which data were available) was selected from the abortion registry. Next, after abortion data were linked to the population registry and all women who had had at least one abortion were removed, a comparison group of women in the same cohorts who had not had an abortion in Finland and who had lived in the country for at least a year within any of the periods 1970–1975, 1980–1985 or 1987–2010 (years for which detailed census information on the Finnish population was available) was randomly selected. The comparison group was twice the size of the study group (183,272 women).

Originally, these data were collected for a study investigating abortion trends over women's reproductive lifespan (ages 15–50). Abortions were oversampled to ensure that the number of women in the data set who had had abortions was adequate for analysis; weights were used in the analyses to control for the oversampling. Samples, rather than the total population, were used because ethics regulations do not permit the use of data on the total population for research purposes. Approval to use these data was obtained from Statistics Finland and the National Institute of Health and Welfare, Finland.

[*] Information on stillbirth or miscarriages is not collected in the data set.

This study uses data on the women's social and demographic characteristics and on the timing of abortions and births (month and year) during their teenage years (ages 15–19, because there were few pregnancies before age 15). We used data on 259,242 women (out of the 274,908 in the original sample) because observations missing crucial information, such as timing of abortion, were excluded. The final data set comprised 25,121 women who had had at least one abortion as a teenager, 17,605 who had had at least one birth and 216,516 who had not experienced either outcome before age 20.

The data contain information on parental socioeconomic status, measured by the occupational status of the adult with the highest socioeconomic status in the household[*] (manual worker, upper- and lower-level non-manual employee, farmer, self-employed, student and other[**]), place of residence (level of urbanization and province), country of birth (Finland versus other), native language (Finnish or Swedish[***] versus other), relationship status at age 19 and at age at first pregnancy (single versus cohabiting or married). Information on socioeconomic status, place of residence and relationship status was initially recorded in the population registry every five years (during census years, 1970, 1975 etc.); data have been recorded annually for place of residence and relationship status since 1987 and for socioeconomic status since 2004. Information on marital status is updated annually in the population registry, and cohabitation has been included on a yearly basis since 1987. The dates of births and abortions are recorded in the birth and abortion registries. Because ethics regulations require that individuals not be identifiable from the data set, parental socioeconomic status and place of residence were obtained only for age 15 (or the nearest year possible), and births and abortions were approximated to the nearest month.

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[*] Occupational socioeconomic status has associations with teenage health that are similar to those of more comprehensive measures of socioeconomic background, such as education and income (source: Macintyre S and West P, Lack of class variation in health in adolescence an artefact of an occupational measure of social class? *Social Science & Medicine,* 1991, 32(4):395–402), so we believe that it is a sufficient measure of teenagers' socioeconomic background. Although parental socioeconomic status may not be as relevant for 18–19-year-olds as for younger teenagers (especially if older teenagers live independently and have children), it has long-term effects on health and behavior later in life, even in old age, and has been shown to be associated with teenage fertility behavior in Finland.[6]

[**] Upper-level employees are considered to be the most privileged group, followed by lower-level employees; manual workers are the least privileged group. The remaining groups are more heterogeneous and thus harder to categorize hierarchically.

[***] Finnish and Swedish are the two national languages of Finland.

Analysis

We calculated descriptive statistics, by cohort, of the proportions who had no pregnancy, only abortion, only childbirth or both outcomes. The descriptive differences were not tested for statistical significance, but because of the large sample size, the estimates are of high precision.

The risk of having a first abortion or birth before age 20 by socioeconomic status was estimated separately for each birth cohort. These data were analyzed in Stata, version 12, using Cox regression[39] and logistic regression.[40] Cox regression was chosen because of its ability to estimate continuous-time event history data and to include time-varying covariates (in this case, relationship status and pregnancy history).

Individuals entered the risk set in January of the year they turned 15, because most information was available for then, rather than for their birthday. The small proportion of women who moved to Finland after their 15th birthday entered the risk set in the January of the year they arrived and were assumed to have had no pregnancy before arrival. The teenagers were followed until the outcome event or, if no event was recorded, censored when they reached age 20 (or earlier, because of death or emigration, in a few cases). Analysis time was age, measured in months. The proportional hazard assumption was tested graphically using log-log plots for socioeconomic status, and the curves were sufficiently parallel to make the proportional hazards assumption (data available on request). The Cox models controlled for level of urbanization, province, country of birth, native language, pregnancy history, relationship status and year of birth. As a test, we ran the analyses without control variables (results available on request), which resulted in similar but stronger associations, underlining the importance of controls.

A second set of analyses used binary logistic regression to examine the odds of the first pregnancy's ending in abortion rather than childbirth by socioeconomic status, controlling for level of urbanization, province, country of birth, native language, relationship status at first pregnancy and age. The explanatory variables were measured when the individual entered the risk set, except for age and relationship status, which were measured in the year of the pregnancy.

All of the analyses were conducted for the entire teenage population, although some studies have pointed out that fertility behavior may differ between those younger than 18 and those

aged 18–19.[24,28] Analyses were originally conducted separately for these two groups (results available on request); however, because the results were almost identical, we chose the simpler approach of analyzing both age-groups together.

We conducted multiple imputation[41] before undertaking the Cox and logistic regression analyses to increase the accuracy of standard errors (compared with using data that have not been imputed) and to avoid bias caused by eliminating individuals with incomplete data. Missing information was replaced for socioeconomic status, relationship status, province and level of urbanization (the proportion of women with missing information was around 10% for socioeconomic status and approximately 1% for these other measures). Because relationship status was a binary variable, it was imputed using logistic regression, whereas multinomial regression was used for the other three. Results with and without imputation were similar (results available on request).

Results

Descriptive Statistics

The largest group by socioeconomic status in all cohorts was manual workers' children—40% of the 1950s cohort, 37% of the 1960s cohort and 30% of the 1970s cohorts (Table 1). Other big groups were upper-level employees' children (8–16%) and lower-level employees' children (13–20%). Although 18% of the teenagers came from farmer backgrounds in the oldest cohort, only 7% did in the two younger cohorts. In each cohort, more than half of the teenagers lived in urban areas (54–61%), and close to one-third lived either in the Southern or in the Western province (32–36%). Although the proportion of teenagers whose native language was other than Finnish or Swedish or who were born outside of Finland was higher in the younger cohorts than the older, a clear majority of the teenagers in all cohorts were native speakers and born in Finland (96–99%). Most teenagers were single at age 19 (more than nine in 10 in the two earlier cohorts and three quarters in the later one). The reduction in the proportion who were single in the youngest cohort is at least partly due to a change in the registries: Since 1987, cohabitation has been recorded; before that, cohabiting couples were recorded as single. This change is also reflected in the proportions of teenagers who were married or cohabiting at the time of their first pregnancy—less than one in 10 in the 1950s and 1960s cohorts, and three in 10 in the 1970s cohort.

Overall, most teenagers did not experience a pregnancy (87–94%, depending on cohort—Table 2). In all cohorts, in general, the proportions who had an abortion, childbirth or both outcomes were highest among those from manual worker backgrounds, those from "other" socioeconomic backgrounds and those for whom data on socioeconomic status were missing. Upper-level employees' children had the highest proportions experiencing no pregnancies (95–97%) and the lowest experiencing childbirth (2% or less in all cohorts). In the 1960s and 1970s cohorts, high proportions of teenagers from lower-level employee, farmer or self-employed backgrounds did not experience pregnancy (92–96%). In the 1950s cohort, the proportion of teenagers who did not experience a pregnancy was second highest among those from student backgrounds (93%). However, because there were only 147 individuals in that group, they were analyzed together with the "other" group in subsequent models to avoid bias and comparability problems, especially since the student category was not available for the 1960s cohort. In the 1970s cohort, there were 1,942 individuals in the student group, a sufficient number for them to be analyzed as a separate category. In all cohorts, the group with the lowest proportion who had no pregnancies was the one missing information on socioeconomic status (81–87%), which highlights the importance of imputation.

Risk of Abortion or Childbirth

The risk of abortion or childbirth was relatively low among teenagers in the upper-level employee group in all cohorts (Table 3). The association was especially pronounced in the childbirth model: Teenagers in the upper-level employee group had a 63–69% lower risk of childbirth than teenagers in the manual worker group in the two later cohorts, and a 53% lower risk in the earliest cohort. The risk of abortion was approximately 45% lower for upper-level employees' children than for manual workers' children in the 1950s and 1970s cohorts, and 53% lower in the 1960s cohort. Also, children of lower-level employees had lower risks of childbearing and abortion than children of manual workers in all cohorts. Lower-level employees' children had 24%, 33% and 20% lower risks of childbearing than manual workers' children in the 1950s, 1960s and 1970s cohorts, respectively; they had an approximately 15% lower risk of abortion than manual workers' children in each cohort. Children of lower-level employees had higher risks of either outcome than children of upper-level employees ($p<.001$; not shown).

The patterns were less clear across cohorts and outcomes for the other socioeconomic groups. In the 1960s and 1970s cohorts, after teenagers in the upper-level employee group, teenagers

from farmer backgrounds were the least likely to have either outcome compared with manual workers' children (36–43%), followed by those from self-employed backgrounds (13–34%). However, teenagers from farmer backgrounds in the 1950s cohort had only a 17% lower risk of childbirth than teenagers in the manual worker group. For teenagers in households headed by students in the 1970s cohort, the risk of neither outcome differed statistically from the risk for teenagers in the manual worker group. For the two latest cohorts, those in the "other" group had 10–40% higher risks of both outcomes than those in the manual worker group; in the 1950s cohort, the risk for this group was not different from that for manual workers' children.

Odds of Choosing an Abortion

Socioeconomic status was associated with teenagers' odds of choosing an abortion over childbirth (Table 4). In all cohorts, teenagers from upper-level employee backgrounds had the highest odds of choosing an abortion: Compared with manual workers' children, these teenagers had three times the odds of having an abortion in the 1950s cohort and more than twice the odds of doing so in the 1960s and 1970s cohorts. In the 1950s and 1960s cohorts, teenagers from lower-level employee backgrounds also had higher odds of abortion than manual workers' children (80% and 48% higher odds, respectively).

Compared with those from manual worker backgrounds, teenagers from self-employed backgrounds in the 1950s and 1970s cohorts had higher odds of choosing abortion (35% higher and 48% higher, respectively). Teenagers from farmer backgrounds had higher odds of choosing an abortion than those in the manual worker group in the 1960s cohort only (35% higher odds). However, teenagers from self-employed and farmer backgrounds had lower odds of choosing an abortion than upper-level employees' children (37–64%, depending on cohort; not shown). Teenagers in the "other" group were less likely than those in the manual worker group to choose an abortion only in the 1960s cohort (15% lower odds).

Discussion

These results show that the risk of experiencing either abortion or, especially, childbirth was elevated for teenagers from groups representing low socioeconomic status; furthermore, among teenagers who experienced a pregnancy, the odds of abortion were elevated for those from relatively privileged socioeconomic groups. These results are in line with findings from the United States,[9,10] the United Kingdom,[5–8] the European Union,[11] Sweden[12] and

Finland.[13,22,24] Differences between children of manual workers and those of upper- and lower-level employees were particularly consistent.

Contrary to what was expected, socioeconomic differences in the risk of experiencing an abortion did not change substantially across cohorts, and inequalities in childbearing were greatest for the 1960s cohort even though this cohort had access to the most comprehensive family planning services and sex education.[32] Socioeconomic differences in teenage childbearing were about the same in the earliest and latest cohorts, although they were larger in the middle one. Furthermore, although socioeconomic differences in pregnant teenagers' odds of choosing an abortion were smaller for the two younger cohorts than for the oldest one, the differences between teenagers from manual worker and upper-level employee backgrounds in all cohorts were remarkably high.

Some of the variation in the associations between socioeconomic status and teenage fertility behavior across cohorts may have been due to structural changes in society. For example, the decrease in the disparity in the risk of childbearing among teenagers from farmer backgrounds might have been due to urbanization, which forced poorer farmers to become employees; farmers who were not forced into this position likely were wealthy and therefore comparable to more privileged groups in the younger cohorts.[42]

Overall, the relationship between socioeconomic status and teenage pregnancy outcomes was similar across cohorts, which may indicate that despite the social-democratic ethos of equality, Finland has done little to address teenage pregnancy differences by socioeconomic status. Alternatively, socioeconomic status and fertility behavior may be associated through mechanisms that are hard to change through policies, such as differences in unconscious reproductive strategies,[17] attitudes and norms related to teenage childbearing, or sexual activity.[14,16] Perhaps teenagers from relatively privileged socioeconomic backgrounds know how to make better use of sex education and family planning services than other teenagers; if this is the case, it might help explain the disparities in the likelihood of teenage pregnancy even though rates overall are falling. Teenagers from more privileged backgrounds may wish to invest more in their children and careers, and consider it easier to do so, than teenagers from families of low socioeconomic status; they therefore may have greater motivation to avoid pregnancy and childbearing.[20,21]

Persistent socioeconomic differences in teenage childbearing rates despite overall declines may reflect that some teenagers simply wish to become parents early on; these desires are often associated with low socioeconomic status. [17–19,21] This possibility is supported by the finding that compared with the differences in the oldest cohort, and despite a wider range of available contraceptive methods that probably enabled the overall decline in the teenage pregnancy rate, differences by socioeconomic status were greatest for the 1960s cohort. The 1950s cohort had to rely on condoms and the combined contraceptive pill (introduced in Finland in 1962) during the first years of the study period; the progestin-only pill and copper IUD have been available only since 1973, and the hormonal IUD since 1976.[43] In the 1970s, 10–15% of 18–19-yearolds used oral contraceptives,[43] whereas use increased from 10% to 20% among 14–18-year-olds during the 1980s and remained at 20% in the 1990s.[15] Thus, the results show that socioeconomic status remains strongly associated with teenage fertility behavior, despite the free education system, better access to a wider range of contraceptives and Finnish welfare policies.

Strengths and Limitations

The main strength of this study is its use of a nationally representative data set of excellent quality.[44,45] The data do not suffer from underreporting of abortions and teenage pregnancies, and they allow for cohort comparisons.

The limitations of the study include the fact that some data are not available from population registers. In particular, information is not collected on several measures known to affect teenage fertility and abortion behavior[10]—motivation for choosing abortion or childbearing, partner's role in the decision, pregnancy intentions, contraceptive use, and attitudes or religious background. Also, because the duration of the pregnancy is unknown, the models estimate time to abortion or childbirth, which are different. However, these differences are assumed to be small enough not to invalidate comparisons, and because the Cox models estimate the rank of events rather than the actual timing, the problem is likely to cause bias only at the very beginning and end of the study period. In addition, data on women born after 1979 were not available, so the latest trends could not be studied. There has been a decline in teenage pregnancy rates recently,[30] but given our results, further studies should assess whether socioeconomic differences still are substantial.

Conclusion

Because social inequalities in teenage pregnancy rates have persisted in Finland across cohorts, evaluations are needed to assess whether adequate information on reproductive health is available and whether teenagers from all socioeconomic groups benefit equally from sex education and know how to access reproductive health care and pregnancy termination services. Special attention should be paid to socioeconomically disadvantaged teenagers, especially if they do not wish to conceive but lack adequate knowledge of contraceptive use or how to access family planning services. However, care must be taken not to stigmatize all teenage pregnancies because some teenagers may wish to carry their pregnancy to term.[18] Therefore, any policy actions introduced should focus not only on pregnancy prevention or termination, but also on facilitating the lives of teenagers with children. Teenagers seeking abortions may benefit from carefully planned postabortion and contraceptive counseling.

Further research using surveys and qualitative data with the aim of learning more about the details of women's decision making is needed. The consequences of teenage pregnancies should be studied to make a contribution to the intense debate of the problematic nature of teenage pregnancies. Additional research is needed to replicate these analyses in other cohorts and societies.

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Table 1 Percentage distribution of Finnish women, by selected characteristics, according to birth cohort

Variable	Category	Cohort		
		1955-1959 (N=104,622)	**1965-1969** (N=96,083)	**1975-1979** (N=58,542)
SES of the principal provider of the family	Manual worker	39.6	36.5	30.4
	Upper-level employee	7.6	10.9	15.7
	Lower-level employee	12.6	20.3	17.9
	Farmer	18.4	6.7	6.5
	Self-employed	6.5	5.5	9.4
	Student	0.1	0.0	3.3
	Other	7.1	8.7	5.4
	Missing	8.2	11.5	11.3
Level of urbanization	Urban	53.5	60.8	60.7
	Semi-urban	18.8	18.0	18.4
	Rural	26.5	20.0	19.1
	Missing	1.2	1.2	1.8
Province	Southern Finland	31.7	35.9	36.1
	Western Finland	34.6	35.3	34.9
	Eastern Finland	15.7	12.9	12.1
	Northern-Finland	10.7	9.4	10.1
	Lapland	5.8	4.9	4.6
	Ahvenanmaa	0.4	0.5	0.5
	Missing	1.2	1.2	1.8
Native language	Finnish or Swedish[†]	99.7	99.3	97.3
	Other	0.3	0.7	2.3
Country of birth	Finland	99.2	98.3	95.8
	Other	0.8	1.7	4.2
Relationship status (age 19)	Single	94.8	91.5	76.4
	Married or cohabiting[‡]	3.9	7.3	22.9
	Missing	1.3	1.3	0.7
Relationship status at 1st pregnancy[§]	Single	87.7	83.8	66.8
	Married or cohabiting[‡]	8.4	9.0	29.8
	Missing	3.9	7.2	3.4
Total		100.0	100.0	100.0

[†] Finnish and Swedish are the two national languages of Finland.
[‡] Before 1987, cohabiting people were classified as single
[§] Based on those who had a teenage pregnancy: 18,143 women in the earliest cohort, 13,528 in the middle one and 7,517 in the last
Notes: Characteristics were measured in January of the year individuals turned 15 or, for those born outside the country, January of the year they arrived in Finland, unless otherwise noted. Percentages are unweighted. Percentages may not total 100.0 because of rounding.

Table 2 Percentage distribution of Finnish women, by teenage pregnancy experience, according to birth cohort and parental socioeconomic status.

	Pregnancy status				
Cohort and socioeconomic status	No pregnancy	Only abortion	Only childbirth	Both outcomes	Total
1955-59 Cohort					
Total	**87.4**	**4.2**	**7.7**	**0.7**	**100.0**
Manual worker	85.3	4.8	9.0	0.9	100.0
Upper-level employee	95.1	3.0	1.8	0.2	100.0
Lower-level employee	90.9	4.3	4.3	0.5	100.0
Farmer	89.7	3.1	6.7	0.4	100.0
Self-employed	89.1	4.2	6.0	0.7	100.0
Student	93.0	1.8	4.9	0.4	100.0
Other	83.1	4.4	11.5	1.0	100.0
Missing	81.1	5.3	12.3	1.4	100.0
1965-69 Cohort					
Total	**91.0**	**4.8**	**3.7**	**0.6**	**100.0**
Manual worker	89.8	5.5	4.0	0.7	100.0
Upper-level employee	96.1	2.9	0.9	0.2	100.0
Lower-level employee	92.4	4.9	2.3	0.5	100.0
Farmer	94.4	3.1	2.3	0.2	100.0
Self-employed	92.5	4.7	2.4	0.5	100.0
Other	88.0	5.7	5.3	1.0	100.0
Missing	86.5	4.5	8.3	0.7	100.0
1975-79 Cohort					
Total	**93.6**	**3.1**	**2.9**	**0.4**	**100.0**
Manual worker	93.2	3.3	3.1	0.4	100.0
Upper-level employee	97.3	2.0	0.6	0.1	100.0
Lower-level employee	94.9	2.9	1.9	0.3	100.0
Farmer	96.4	1.9	1.5	0.2	100.0
Self-employed	95.0	2.9	1.9	0.2	100.0
Student	92.3	3.2	4.1	0.5	100.0
Other	90.1	4.3	4.8	0.7	100.0
Missing	85.2	5.0	8.9	0.9	100.0

Notes: Percentages are weighted and were calculated before multiple imputation. Percentages may not total 100.0 because of rounding.

Table 3 Hazard ratios (and 95% confidence intervals) from regression analyses assessing the risk of teenage abortion and childbirth, by birth cohort and parental socioeconomic status

Cohort and socioeconomic status	Abortion	Childbirth
1955-59 Cohort		
Manual worker (ref)	1.00	1.00
Upper-level employee	0.54 (0.49-0.60)***	0.47 (0.37-0.60)***
Lower-level employee	0.83 (0.78-0.89)***	0.76 (0.66-0.87)***
Farmer	0.69 (0.65-0.73)***	0.83 (0.78-0.89)***
Self-employed	0.89 (0.81-0.97)*	0.87 (0.73-1.02)
Other	0.98 (0.90-1.06)	1.01 (0.93-1.10)
1965-69 Cohort		
Manual worker (ref)	1.00	1.00
Upper-level employee	0.47 (0.43-0.51)***	0.31 (0.23-0.43)***
Lower-level employee	0.85 (0.80-0.90)***	0.67 (0.60-0.75)***
Farmer	0.58 (0.50-0.68)***	0.57 (0.49-0.66)***
Self-employed	0.85 (0.77-0.93)***	0.66 (0.56-0.77)***
Other	1.10 (1.02-1.18)**	1.20 (1.09-1.31)***
1975-79 Cohort		
Manual worker (ref)	1.00	1.00
Upper-level employee	0.56 (0.51-0.62)***	0.37 (0.26-0.52)***
Lower-level employee	0.87 (0.80-0.95)**	0.80 (0.69-0.91)***
Farmer	0.64 (0.51-0.81)**	0.63 (0.49-0.81)***
Self-employed	0.87 (0.78-0.97)*	0.69 (0.59-0.82)***
Student	1.01 (0.85-1.21)	1.20 (0.99-1.47)
Other	1.31 (1.16-1.47)***	1.40 (1.22-1.61)***

*****p<0.05 **p<0.01 ***p<0.001

Notes: Both models control for level of urbanization, province, country of birth, native language, pregnancy history, relationship status and year of birth. ref=reference group.

Table 4 Odds ratios (and 95% confidence intervals) from logistic regression analysis assessing the likelihood of abortion, by birth cohort and parental socioeconomic status

Cohort and socioeconomic status	Odds ratio
1955-59 Cohort	
Manual worker (ref.)	1.00
Upper-level employee	3.08 (2.37-3.99)***
Lower-level employee	1.80 (1.50-2.17)***
Farmer	1.10 (0.98-1.22)
Self-employed	1.35 (1.16-1.56)***
Other	0.76 (0.50-1.15)
1965-69 Cohort	
Manual worker (ref.)	1.00
Upper-level employee	2.21 (1.76-2.76)***
Lower-level employee	1.48 (1.30-1.68)***
Farmer	1.35 (1.05-1.74)*
Self-employed	1.32 (0.93-1.86)
Other	0.85 (0.74-0.99)*
1975-79 Cohort	
Manual worker (ref.)	1.00
Upper-level employee	2.34 (1.78-3.08)***
Lower-level employee	1.23 (0.99-1.53)
Farmer	1.15 (0.78-1.69)
Self-employed	1.48 (1.13-1.93)**
Student	0.75 (0.54-1.06)
Other	0.79 (0.59-1.07)

*****p<0.05 **p<0.01 ***p<0.001

Notes: Model controls for level of urbanization, province, country of birth, native language, relationship status at first pregnancy and age. ref=reference group.