



Original article

Adolescent Pregnancy, Birth, and Abortion Rates Across Countries: Levels and Recent Trends



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 A B S T R A C T

Purpose: To examine pregnancy rates and outcomes (births and abortions) among 15- to 19-year olds and 10- to 14-year olds in all countries for which recent information could be obtained and to examine trends since the mid-1990s.

Methods: Information was obtained from countries' vital statistics reports and the United Nations Statistics Division for most countries in this study. Alternate sources of information were used if needed and available. We present estimates primarily for 2011 and compare them to estimates published for the mid-1990s.

Results: Among the 21 countries with complete statistics, the pregnancy rate among 15- to 19-year olds was the highest in the United States (57 pregnancies per 1,000 females) and the lowest rate was in Switzerland (8). Rates were higher in some former Soviet countries with incomplete statistics; they were the highest in Mexico and Sub-Saharan African countries with available information. Among countries with reliable evidence, the highest rate among 10- to 14-year olds was in Hungary. The proportion of teen pregnancies that ended in abortion ranged from 17% in Slovakia to 69% in Sweden. The proportion of pregnancies that ended in live births tended to be higher in countries with high teen pregnancy rates ($p = .02$). The pregnancy rate has declined since the mid-1990s in the majority of the 16 countries where trends could be assessed.

Conclusions: Despite recent declines, teen pregnancy rates remain high in many countries. Research on the planning status of these pregnancies and on factors that determine how teens resolve their pregnancies could further inform programs and policies.

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**IMPLICATIONS AND
 CONTRIBUTION**

Adolescent pregnancy rates declined since the mid-1990s in most developed countries with reliable trend data, but the rate remains exceptionally high in the United States. Rates are even higher in Sub-Saharan Africa and in some former Soviet countries where data quality is variable. The proportion of pregnancies ending in abortion varies widely across countries.

The causes and consequences of teen pregnancies have been the topic of much research, policy and program discussion, and debate. Some studies have suggested that teen pregnancies compromise women's educational prospects and economic opportunities [1–3], and other work indicates that

teen pregnancies are a marker of such conditions, rather than an underlying cause of them [4,5]. There does appear to be consensus, however, that teen pregnancies are associated with poor social and economic conditions and prospects.

A substantial proportion of teen births are intended in developing countries where many women still marry early [6]. However, even intended pregnancies to young women in low-resource settings are of policy and public health relevance because of the risks associated with them. The risk of death associated with pregnancy is about a third higher among 15- to 19-year olds than among 20- to 24-year olds [7]. It appears that

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young adolescents are also more likely to experience obstructed labor, fistula, and premature delivery and to give birth to low birth weight babies than older women [1].

Country-specific estimates of pregnancy, birth, and abortion levels among adolescents can motivate policy and programmatic responses to teen pregnancies and help monitor progress toward reducing their incidence. Countries with low levels of adolescent pregnancy might serve as references or models for efforts to reduce levels elsewhere. Even where incidence is low, data on teen pregnancies can highlight remaining unmet needs for information and services to help adolescents prevent unintended pregnancies.

Earlier reviews of adolescent pregnancy and childbearing rates across countries covered trends up to the mid-1990s and found that these events were becoming less common in the majority of countries for which evidence was available [8,9]. At that time, the teen pregnancy rate in the United States was higher than in any other developed country for which estimates were available except Russia. Regional estimates for the developing world indicated that adolescent birth rates were especially high in Sub-Saharan Africa [3].

We examine pregnancy incidence among adolescents (15–19 years old) and young adolescents (10–14 years old) in all developed and developing countries for which recent data on teen births and abortions could be obtained. We examine abortion¹ and birth rates and the proportion of pregnancies that end in abortion in these countries and the correlation between adolescent pregnancy rates and the proportion of pregnancies that end in abortion. We examine trends in these rates since the mid-1990s through 2008–2011 where data allow.

Methods

To estimate teen² and early adolescent pregnancy rates, we require data on numbers of births, abortions, and females 10–14 and 15–19 years old. For most countries, information on all three components was obtained, in descending order of preference, from countries' published vital statistics reports, compilations of these reports in the United Nations (UN) Statistics Division's Demographic Yearbook [10], the Transformative Monitoring for Enhanced Equity Database maintained by the United Nations Children's Fund [11], or the UN Population Division's population projections [12]. The data sources used for each component in each country are presented in Appendix Table 1.

Birth data are generally complete, but the collection and evaluation of abortion data and estimation of miscarriages merit additional discussion. Abortion reports in the sources previously mentioned include only procedures that were performed within the bounds of the law. In countries with liberal abortion laws, nearly all, if not all, abortions are legal.³ However, abortion statistics are not complete for all countries, even for legal abortions. The quality of abortion statistics varies across countries and depends on a number of factors

including whether abortion reporting is voluntary or required by law, whether all types of induced abortion procedures are required to be reported, whether there are consequences for failure to report abortions, such as lack of reimbursement for services rendered, whether there are financial disincentives to reporting abortions, such as tax obligations associated with abortion performed, and whether reporting systems have complete coverage of abortions provided in the private sector. The completeness of reporting can also change over time if circumstances that influence reporting change. In this analysis, we categorize countries into three groups:

1. Those with liberal laws whose official abortion statistics are deemed complete, that is, likely to include at least 90% of all abortions.
2. Those with liberal abortion laws and incomplete abortion statistics, or for which completeness of reports is uncertain.
3. Those with restrictive abortion laws, for which abortion estimates are available from country studies rather than official statistics.

Classifications of the completeness of abortion reports were based on expert assessments obtained for a recent study of abortion incidence [13].⁴ For that undertaking, input was sought from agencies involved in data collection and from local experts, primarily demographers and other researchers, on the completeness of official reports. In addition, comparisons with estimates from alternate sources, such as surveys of women, were made when such sources were available.

Additional details on the countries with incomplete statistics and those with restrictive abortion laws follow.

Countries with incomplete statistics

For countries with incomplete abortion statistics, pregnancy rates and the proportions of pregnancies that end in abortion presented here are lower than the true values because the numbers of abortions are undercounted. Such estimates are nevertheless useful because they indicate the minimum levels of both measures in these countries. For a few countries lacking official abortion reports with sufficient coverage, we used abortion estimates from alternate sources.

For the United States, we combined estimates of abortion incidence based on a 2010 census of abortion providers [14] with information on the age distribution of abortions compiled annually by the Centers for Disease Control and Prevention [15].⁵ Because the census is deemed to include more than 90% of abortions, the resulting estimates for the United States are classified as complete.

Data on the level of underreporting in each country are limited, and we did not attempt to quantify the level of underreporting beyond ascertaining whether reports included at least 90% of all abortions nor did we adjust statistics to account for possible levels of underreporting.

¹ Unless otherwise indicated, "abortion" refers to induced abortions throughout this report.

² The terms "teens" and "adolescents" are used interchangeably in these analyses to refer to 15- to 19-year olds.

³ Countries with highly restrictive laws and official reports of legal abortions performed are not included in this review because legal abortions account for a very small proportion of all procedures done in those countries.

⁴ The study on abortion incidence referenced here includes more countries than the present study because data on age-specific abortion incidence is needed to compute teen pregnancy rates, and age-specific data are not available for all countries with overall abortion estimates.

⁵ Centers for Disease Control and Prevention estimates of the age distribution of women who have abortions are based on abortion reports that are deemed to include about 70% of all abortions done in the United States.

Countries with restrictive abortion laws

Reliable national estimates of age-specific incidence of abortion are available for only five countries with restrictive laws, all in Sub-Saharan Africa and Latin America: Burkina Faso, Ethiopia, Kenya, Malawi, and Mexico.⁶ These abortion estimates are derived from country studies [16–20]. Abortion estimates in these countries include both legal and illegal abortions.

Miscarriages

The incidence of miscarriage was estimated on the basis of clinical studies of pregnancy loss by gestational age, which indicate that recognized miscarriages at five or more weeks of gestation are equal to approximately 20% of births plus 10% of induced abortions [21,22]. Findings from recent surveys of women in the United States support these model-based estimates [23].

Birth rates are compared across all countries covered in this review regardless of whether the abortion and pregnancy rates are complete because births are not as vulnerable to under-reporting as abortions.

Adolescent pregnancy, birth, and abortion rates are the number of events per 1,000 females 15–19 years old. The rates for young adolescents are calculated as the number of events per 1,000 females 10–14 years old. Rates among young adolescents would likely be higher if they could be computed for 13- to 14-year olds, to whom most of these events likely occur, but population estimates for this 2-year age group are not available for many countries. For all pregnancies, the adolescent's age is measured at the time of the pregnancy outcome. Confidence intervals are not presented because vital statistics on live births and populations are not considered estimates with uncertainty, but true population values.

The majority of findings presented here are for developed countries according to the UN classification of countries [24].⁷ We primarily present estimates for 2011, the most recent year for which information is available for most countries. If information was not available for 2011, we sought estimates for an earlier time period but not earlier than 2008. The only exception is Kenya, for which we report an estimate for 2012 because that is the only year for which relevant information is available.

We examine trends in countries for which estimates for the mid-1990s were previously published [8], if estimates are deemed to be sufficiently complete in both periods. The estimates for that period were similarly made across all possible countries and classified by completeness of reports. The previously published data included only births and abortions; we estimated numbers of miscarriages in the mid-1990s to render the pregnancy estimates comparable with those for 2011. Trends in teen pregnancy rates since the mid-1990s are presented both as the average annual change in absolute rate points and the annualized⁸ percentage change in each country. Both measures

are useful because the absolute point change can be large if the baseline rate is high, whereas the percentage change controls for differences in the baseline rate.

To examine the correlation between teen pregnancy rates and the proportion of pregnancies that ended in abortion in 2011, we used bivariate analyses of two continuous variables to estimate the correlation coefficient and associated *p* value.

Results

Among the 21 countries with liberal abortion laws and complete teen pregnancy estimates for 2008–2011, the rate was the highest in the United States (57 pregnancies per 1,000 adolescents in 2010), followed by New Zealand (51) and England and Wales (47) (Table 1). The lowest teen pregnancy rate was in Switzerland (8), followed by the Netherlands (14), Singapore (14), and Slovenia (14). Among countries with incomplete estimates, rates were high in Azerbaijan (67), Georgia (62), and Romania (61). Adolescent pregnancy rates were far higher in Mexico and the Sub-Saharan African countries than in any other countries in this review, ranging from 121 (Ethiopia) to 187 (Burkina Faso).

Because of a high teen pregnancy rate and large population, the estimated annual number of teen pregnancies was far higher in the United States (614,000) than any other country in this review. The number of teen pregnancies was also high in Mexico (677,000) and Ethiopia (521,000).

The birth rates in the countries with complete pregnancy estimates ranged from 2 (Switzerland) to 34 (the United States). However, teen birth rates can be fairly compared across a broader range of countries because these statistics are less prone to underreporting than are abortion rates. Among all 49 countries reviewed here, the rates were the highest by far in countries in Sub-Saharan Africa. The rate exceeded 90 in all four countries represented from this region and was the highest in Burkina Faso (128). Outside Sub-Saharan Africa, the highest teen birth rate was in Mexico (68), followed by Azerbaijan (54). Among the Northern, Western, and Southern European countries, the birth rate was the highest in Scotland (23) and England and Wales (21).

The highest adolescent abortion rate among countries with complete abortion records was in England and Wales (20) and Sweden (20). It was 15 in the United States. In about half of the countries, the rate was between 8 and 17. The teen abortion rate was the lowest in Switzerland (5). In Mexico and the countries in Sub-Saharan Africa, where abortion is largely illegal, the adolescent abortion rate ranged from 11 (Ethiopia) to 44 (Mexico).

The proportion of teen pregnancies that ended in abortion varied widely across the countries with complete estimates, from 17% in Slovakia to 69% in Sweden. In half of the countries, 35%–55% of pregnancies ended in abortion. This statistic was not calculated for the countries with incomplete abortion statistics. In Mexico and the countries in Sub-Saharan Africa, the proportion ranged from 9% in Ethiopia to 34% in Mexico.

Among countries whose reports are deemed to include at least 90% of all abortions done, the reports might still omit up to 10% of all abortions. If 10% of abortions were missing from these reports, the true percentage of pregnancies that ended in abortion would be 1.5%–2.4% points higher than indicated in our results (not shown).

⁶ In Mexico, less than 10% of women of reproductive age live in the Federal District where abortion is permitted on demand up to 12 weeks of gestation. Although the conditions under which abortion is legally allowed in Ethiopia were recently broadened, it is still counted among countries with restrictive laws.

⁷ Developing countries covered in this report include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Hong Kong, Israel, and Mongolia, all of which have liberal abortion laws, and Burkina Faso, Ethiopia, Kenya, Malawi, and Mexico where abortion laws are restrictive.

⁸ Calculated, for example, as $(\text{Rate}_{2011}/\text{Rate}_{1995}) - (1/[2011 - 1995]) - 1$.

Table 1

Adolescent birth, abortion, and pregnancy rates and percentage of pregnancies ending in abortion among females 15–19 years old, 2011 or most recent prior year

Country	Year	Number of pregnancies	Rate per 1,000 females 15–19 years old			Pregnancies that end in abortion (%)
			Pregnancies ^a	Abortions	Births	
Countries with complete abortion statistics						
Belgium	2009	6,800	21	8	10	38
Denmark	2011	3,600	21	14	5	67
England and Wales	2011	81,000	47	20	21	42
Estonia	2011	1,400	43	19	19	43
Finland	2011	3,700	23	13	8	55
France	2011	47,900	25	15	7	61
Hungary	2011	11,600	38	16	18	41
Iceland	2011	300	30	15	11	51
Israel	2011	6,800	23	8	13	32
Netherlands	2008	6,900	14	7	5	50
New Zealand	2011	7,900	51	18	26	36
Norway	2011	3,500	23	13	7	56
Portugal	2011	6,800	25	8	13	33
Scotland	2011	7,400	46	17	23	37
Singapore	2011	1,800	14	8	5	54
Slovakia	2011	5,900	33	6	22	17
Slovenia	2009	700	14	7	5	48
Spain	2011	28,000	26	13	10	50
Sweden	2010	9,000	29	20	6	69
Switzerland	2011	1,700	8	5	2	59
United States	2010	614,000	57	15	34	26
Countries with incomplete official abortion statistics						
Albania	2009	3,400	23	1	18	4
Armenia ^b	2011	4,286	37	5	26	13
Azerbaijan ^b	2011	29,268	67	4	54	3
Belarus	2008	13,200	39	12	22	30
Canada	2011	29,900	28	12	13	42
Croatia	2011	2,100	17	3	12	17
Czech Republic	2011	5,800	20	7	11	33
Georgia	2011	9,900	62	11	42	17
Germany	2011	24,200	9	2	5	23
Hong Kong	2009	2,100	10	5	4	51
Japan	2010	38,500	13	7	4	53
Kazakhstan ^b	2011	25,915	40	4	29	10
Kyrgyzstan ^b	2011	16,130	57	6	41	11
Latvia ^b	2011	1,631	28	9	15	33
Lithuania	2011	2,300	19	4	13	21
Macedonia ^b	2011	1,816	25	3	18	11
Moldova	2010	6,300	43	9	27	21
Mongolia	2008	4,400	29	5	19	17
Montenegro ^b	2011	397	19	1	14	6
Romania	2011	34,700	61	17	35	28
Russian Federation	2011	197,100	49	16	26	34
Serbia ^b	2011	5,010	26	3	19	11
Ukraine	2011	72,300	44	9	28	21
Countries with abortion estimates from country studies^c						
Burkina Faso	2008	147,700	187	30	128	16
Ethiopia	2008	520,700	121	11	91	9
Kenya	2012	348,900	174	38	111	22
Malawi	2009	100,300	154	21	109	14
Mexico	2009	677,000	130	44	68	34

Additional notes:

Albania: Abortion estimates are from a nationally representative survey of women.

France: Population estimate is for the start of the year.

Germany: Includes abortions for ≤17-year olds only.

^a Pregnancies are composed of miscarriages (not shown), abortions, and births.^b Pregnancies are calculated using birth, abortion, and miscarriage rates with population estimates, and they include births and abortions to all females under 20 years old.^c Abortion rates are based on country studies using an indirect estimation technique.

For the countries with complete statistics, there is an inverse correlation between the pregnancy rate and the proportion of pregnancies ending in abortion ($\rho = -.49$; $p = .02$; Figure 1). In countries with high teen pregnancy rates, a smaller proportion of those pregnancies ended in abortion. As a result, the spread in birth rates is even greater than the already large spread in pregnancy rates. For example, the U.S. teen pregnancy rate is

about seven times that of Switzerland, but the U.S. birth rate is 15 times that of Switzerland.

Pregnancy, birth, and abortion rates among young adolescents (10–14 years old) are far lower than among 15- to 19-year olds (Table 2). Of the 23 countries for which birth rates to 10- to 14-year olds are presented, the highest was in Romania (1.40), followed by the United States (.45). In the majority of countries,

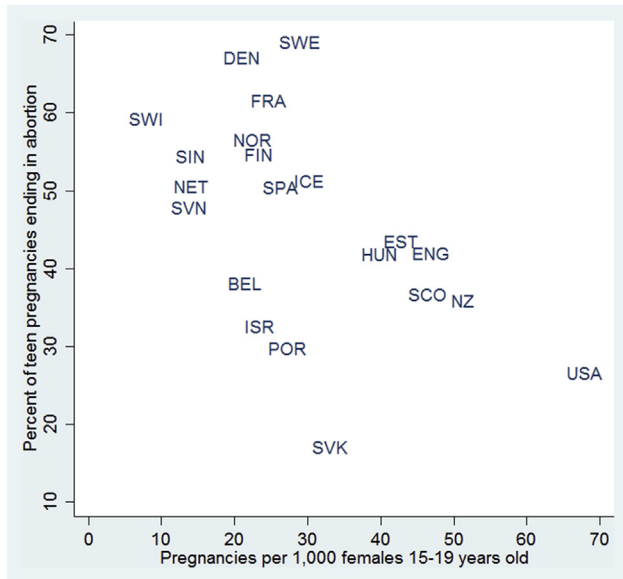


Figure 1. Percentage of teen pregnancies ending in abortion is inversely correlated with teen pregnancy rate ($\rho = -.53$). BEL = Belgium; DEN = Denmark; ENG = England and Wales; EST = Estonia; FIN = Finland; FRA = France; HUN = Hungary; ICE = Iceland; ISR = Israel; NET = The Netherlands; NOR = Norway; NZ = New Zealand; POR = Portugal; SCO = Scotland; SIN = Singapore; SPA = Spain; SVK = Slovakia; SVN = Slovenia; SWE = Sweden; SWI = Switzerland; USA = United States.

there were fewer than .20 births per 1,000 10- to 14-year-old girls. Of the 11 countries with complete estimates of young adolescent pregnancy rates, the lowest was in Switzerland (.09) and the highest was in Hungary (1.19 pregnancies per 1,000 females 10–14 years old) and the United States (1.08). The rate was even higher in Romania (2.64) where it is likely underestimated. Estimates for this age group are not available from the studies conducted in countries with restrictive abortion laws. The percentage of pregnancies to girls in this age group that ended in abortion was the lowest in Slovakia (22%) and otherwise ranged from 46% in the United States to 87% in Sweden. Generally, a higher proportion of pregnancies to 10- to 14-year olds ended in abortion compared with the proportion among 15- to 19-year olds.

Trends

The teen pregnancy rate declined in the majority of the 16 countries with complete estimates in both the mid-1990s and 2011 (Figure 2; see also Appendix Table 2 for pregnancy, birth, and abortion rates in the mid-1990s). The steepest annualized percentage change occurred in Estonia (4% per year). The decline might have been steeper in Russia and some other former Soviet countries, but incomplete abortion reports preclude an assessment of trends in these countries. The steepest average annual point change in the rate was in the United States (2.9 points per year, on average) where the rate was the highest in 1996. The teen pregnancy rate increased in Belgium and Sweden. However, current rates in these countries are still fairly low, at 21 and 29, respectively.

In most countries, the birth rate declined more steeply than the abortion rate. Exceptions are Hungary, Slovakia, and the United States where the abortion rate declined more steeply than the birth rate. In England and Wales, Finland, the

Table 2

Adolescent birth, abortion, and pregnancy rates and percentage of pregnancies ending in abortion among females 10–14 years old, 2011 or most recent prior year

Country	Year	Rate per 1,000 females 10–14 years old			Pregnancies that end in abortion (%)
		Pregnancies ^a	Abortions	Births	
Countries with complete abortion statistics					
Estonia	2012	.27	.21	.04	77
Hungary	2011	1.19	.71	.34	60
New Zealand	2011	.73	.48	.17	65
Portugal	2011	.59	.30	.21	51
Singapore	2011	.22	.14	.06	63
Slovakia	2011	.50	.13	.30	26
Slovenia	2009	.12	.09	.02	71
Spain	2011	.64	.43	.14	67
Sweden	2010	.91	.79	.03	87
Switzerland	2010	.09	.07	.01	74
United States	2010	1.08	.49	.45	46
Countries with incomplete official abortion statistics					
Belarus	2008	.22	.14	.06	62
Croatia	2011	.12	.03	.07	29
Czech Republic	2010	.27	.18	.07	64
Georgia	2008	.26	.03	.19	12
Hong Kong	2009	.23	.15	.05	65
Japan	2010	.18	.14	.02	80
Latvia	2010	.25	.13	.09	53
Lithuania	2011	.12	.03	.08	24
Moldova	2010	.21	.10	.08	49
Romania	2011	2.64	.87	1.40	33
Russian Federation	2011	.33	.18	.11	55
Serbia	2010	.46	.07	.32	14

^a Pregnancies are composed of miscarriages (not shown), abortions, and births.

Netherlands, Scotland, and Sweden, the teen abortion rate increased, whereas the teen birth rate declined.

Discussion

Although age-specific birth and abortion rates are periodically compiled across countries, this analysis represents the first known assessment of teen pregnancy rates, including births, abortions, and miscarriages, across a span of countries, and examination of trends since the mid-1990s across countries. In addition, this is the first to include teen pregnancy estimates for some countries with restrictive abortion laws.

We found that, despite a considerable decline in recent decades, the highest teen pregnancy rate in the developed world outside the former Soviet bloc is still in the United States, and the highest rates in Europe outside the former Soviet bloc are in England and Wales and Scotland. As in the 1980s and early 1990s, pregnancy rates continued to fall in the majority of countries with trend data.

This review is subject to some limitations. It only includes countries for which estimates of both births and abortions are available. Rates and trends could be different in countries that are not included in this review.

Age-specific pregnancy rates for narrower age groups would serve to more precisely identify those teens with high pregnancy rates. For example, in the United States and the United Kingdom, the pregnancy rate is higher among 18- to 19-year olds than among 15- to 17-year olds [25,26].

Trends are not always monotonic. In Canada, a more detailed review of data indicated that the teen pregnancy rate leveled off in 2006 after a period of decline [27]; in Sweden, the rate seems

to have stabilized since about 2002, after a decade-long upward trend [28]; and in the United States, the pace of decline has been increasing [25].

Not surprisingly, adolescent pregnancy and birth rates are higher in Mexico and the countries in Sub-Saharan Africa than in the other countries in this review. In these regions, where norms often include early age at marriage and early start of child-bearing, a larger proportion of pregnancies to adolescents are likely to be intended than in developed countries. For example, in Sub-Saharan Africa as a whole, only about 35% of pregnancies to 15- to 19-year olds in 2007 were unintended [29]. The planning status of pregnancies to teens is not systematically collected across developed countries, but in the United States, it is estimated that 82% of pregnancies to teens are unintended [30].

This is a descriptive study, not an inferential one, and we did not examine the factors that explain the differences across countries or trends over time. However, much research has been directed at understanding the possible drivers of teen pregnancy rates across populations. The most important immediate determinants of pregnancy incidence are sexual activity and contraceptive nonuse. Evidence indicates that, across industrialized countries, differences exist in contraceptive prevalence among adolescents, more so than in the level of sexual activity [27,31,32]. Method mix and the effectiveness of the methods commonly used likely also influence differences in unintended pregnancy rates among teens across populations.

Among the more distal determinants of teen pregnancy rates are social, economic, and cultural factors. Evidence suggests that the level of national wealth, the pace of economic development, and the magnitude of income inequality within countries are all associated with differences in teen birth rates between countries [33]. The level of acceptance of adolescent sexuality and the social expectation that teens will responsibly use contraception have also been linked to levels of contraceptive use [34]. Recent evidence from Europe indicates that the provision of free or subsidized contraceptives is associated with relatively low pregnancy and birth rates [35].

Studies have more frequently examined the relationship among social, economic, and cultural factors and differences in teen pregnancy rates within countries. In the United Kingdom and the United States, for example, teen pregnancy rates are higher in the most socioeconomically disadvantaged groups [25,26,36]. In the United States, the pregnancy rate is 100 among black teenagers and 38 among white teens (a rate that is still high for a developed country),⁹ although this differential has decreased with time [37]. Qualitative research in the United Kingdom points to poor material circumstances, unhappiness at home or at school, and low expectations for the future as factors associated with high teen pregnancy rates [38].

At the other end of the spectrum, the very low teen pregnancy rate in Switzerland exists in the context of long-established sex education programs, widespread expectation that sexually active teens will use contraception, free family planning services and low-cost emergency contraception [39]. But even in Switzerland, statistics indicate that teen pregnancy rates vary with levels of education and cultural background of adolescent girls.

Teen birth rates are high in many Eastern Europe and Central Asian countries. These high rates have been attributed to a number of barriers to access to contraception. In some former Soviet countries, females under 18 years old cannot access sexual

and reproductive health services without a parent's consent [39]. Other barriers noted in situational analyses include the high cost of supplies, prescription requirements for some methods, limited numbers of outlets from which to obtain contraceptive supplies, lack of sexuality education programs (and poor quality of programs where they do exist), and cultural norms that limit the use of contraception [40,41].

The same proximate and distal factors that help explain differences in teen pregnancy rates across countries at one point in time have likely also contributed to trends in teen pregnancy rates over time. Relatively small downward trends in the prevalence of adolescent sexual activity and more substantial upward trends in contraceptive prevalence have been documented in the United States [32] and Canada [27].

We found that the proportion of teen pregnancies that end in abortion varies widely across countries with liberal abortion laws. The inverse association between the pregnancy rate and the proportion of pregnancies that end in abortion might reflect that a greater proportion of pregnancies are planned where rates are high. Alternately, it could suggest that the constellation of forces that make it hard for adolescents to prevent teen pregnancies (such as limited access to sexual and reproductive health services including family planning) also limit their ability to terminate unplanned pregnancies.

Additional research would help us better understand circumstances that can lead to teen pregnancies and how these circumstances can be influenced. Examination of the factors that influence whether an adolescent who gets pregnant will seek an abortion or have a child can also inform how adolescents can be supported in the face of a pregnancy. Moreover, further research to help disentangle the factors that are causally associated with unplanned teen pregnancies from the factors that are simply correlated with such pregnancies can inform interventions aimed at helping adolescent girls avoid unintended pregnancy and instead take advantage of other opportunities before them.

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⁹ Rates are for 2008.

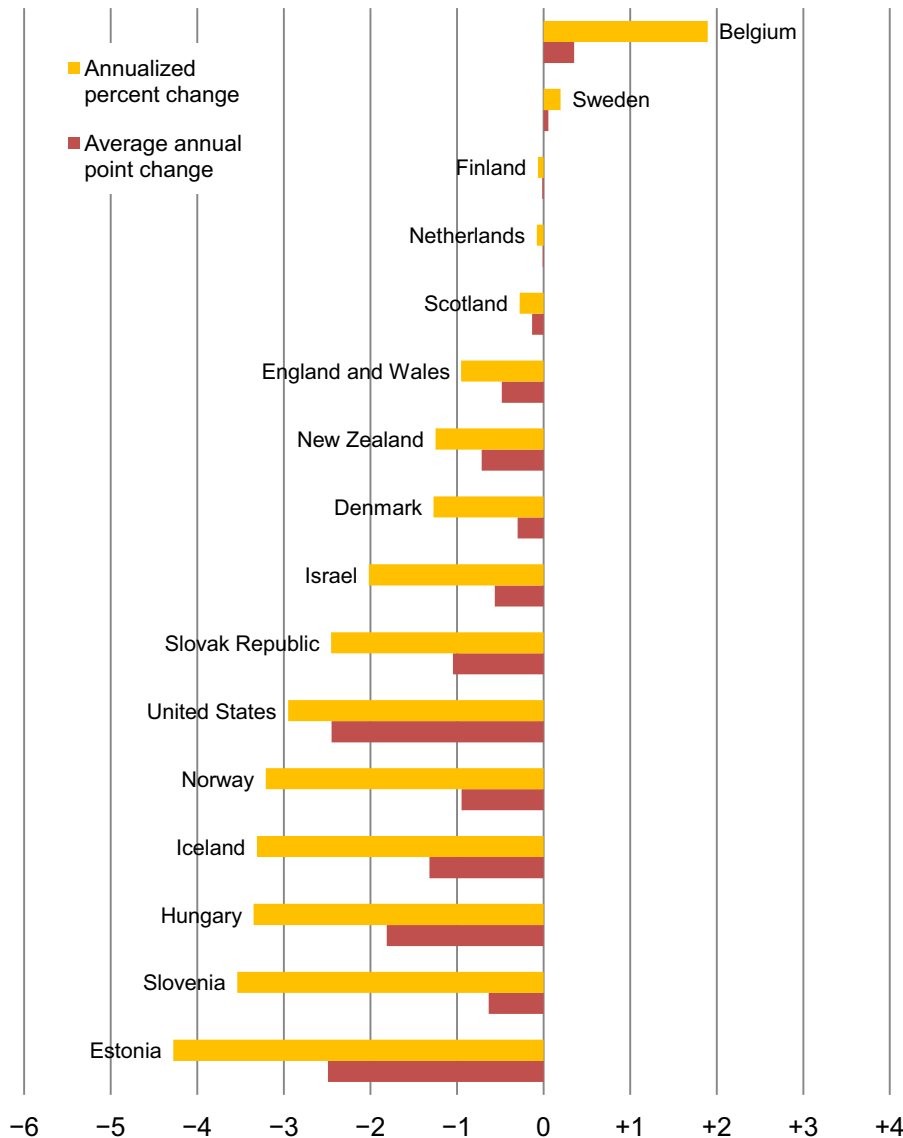


Figure 2. Changes in adolescent pregnancy rates, 1995–2011. See Table 1 and Appendix Table 1 for reference years.

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Supplementary Data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.jadohealth.2014.09.007>.

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